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Sixty-four emotionally handicapped elementary school students with no neurological defect or subnormal intelligence were randomly assigned to four experimental regular classes, and two contrast special classes. The experimental classes received a modified curriculum utilizing the simulated environments technique through the unit approach in social studies with primary emphasis placed upon interaction in small group situations. The contrast classes received whatever was available in their schools or individual instruction in a highly structured environment. Results indicated significant differences ($p<.01$) favoring the experimental groups in interpersonal relationships, personal effectiveness in social situations, and use of problem solving skills. However, there were no differences between regular and special class groups. Improvement was noted in all groups on the behavior scales. The only significant difference in academic achievement was in reading comprehension and favored the special classes ($p<.05$). It was concluded that the experimental technique has a positive effect on the ability of these children to relate with others and to apply problem solving skills to learning and personal problems. (Author/RS)

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EDUCATIONAL PROGRAMMING IN SIMULATED ENVIRONMENTS FOR SERIOUSLY EMOTIONALLY HANDICAPPED ELEMENTARY SCHOOL CHILDREN

September 1967

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FINAL REPORT

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Rozelle J. Miller

September 1967

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Maryland State Department of Education

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I. INTRODUCTION

A. The Problem

Perhaps no segment of the school population reflects more dramatically the impact of conflicting post-war cultural changes than the emotionally handicapped. The potential of both the home and the school for creating and perpetuating conflict and frustration and for nurturing low self-esteem is mirrored in these disturbed young people, in their distorted self concepts, warped attitudes, and deviant behavior.

Despite the fact that mental illness ranks first among the nation's health problems, the general public and the traditional schools have been slow to recognize their roles in the mental health movement. Further, a critical shortage in the mental health professions indicates a need for greater involvement of the schools in the prevention, identification, and treatment of emotional handicap. There are indications that the schools can and should play a major role in the development of healthy personalities and in dealing with children having emotional problems. To acknowledge the school's role in mental health implies a willingness on the part of educators to assume professional responsibility for programs which implement in action those familiar goals and objectives which characterize the modern school curriculum as the educational right of all youth.

In accepting their role in the education of the emotionally handicapped, two of the most pertinent areas of concern to educators center around (1) deciding the types of special services to provide and (2) designing a curriculum that will give equal consideration to emotional difficulties and related educational problems.

Various types of programs have been established in schools including special classes, resource and project rooms, crisis teaching, and special placement in regular classrooms. Of these, the special class approach appears to be the primary means of dealing with the education of children who are emotionally handicapped, although the literature presents little evidence that this type of intervention is superior to other methods of psychoeducational programming. Therefore, this study investigated the effectiveness of simulated environments technique in both regular and special classes.

B. Objectives

The major objective of this study was to provide information and guidelines for the establishment of programs for emotionally handicapped elementary school children.

More specifically the investigation was concerned with the following objectives:

1. To determine the effectiveness of the simulated environments technique as measured by academic achievement and behavioral change (personal and social adjustment).

2. To determine which of two methods of providing simulated environments instruction is superior:

a. small size special classes consisting of emotionally handicapped pupils only, or

b. regular size classes with a small number of emotionally handicapped pupils.

3. To develop and field test curricular materials in the social studies for emotionally handicapped children at the elementary level.

C. Related Research and Rationale

1. Types of Classes - The literature reveals various methods of educational treatment being administered to emotionally handicapped children. Some reports advocate keeping the child in as normal a school situation as possible by placing him in different types of school settings, i.e. special class, special placement in regular class, adolescent group counseling, and special activity groups (Bower, 1961).

Other reports indicate that the emotionally handicapped child is helped if placed in a special class of a nondirective or permissive type. This nondirective approach to the psychoeducational development of children has been one of the strong therapeutic influences in education in the past two decades. Advocates of this method take the position that positive changes occur when, within defined limits, a permissive atmosphere exists for self-expression on the part of the child (Axline, 1947), (Rogers, 1951), and (D'Evelyn, 1957).

An examination of more recent investigations reveals support for special class procedures based upon structure involving consistent, realistic expectations, especially for brain-damaged and/or hyperactive emotionally handicapped children (Cruickshank and others, 1961) and (Haring and Phillips, 1962).

2. Curriculum - In virtually none of these studies were curricular development and methodology reported to the extent that the teacher of mentally handicapped children could derive a usable curricular design. Major focus in curriculum appears to have been directed toward remediation in the academic areas. There is little evidence that curricular content has been utilized to develop better

personal adjustment and social awareness skills.

The present investigator believes that the social studies program can be designed with goals, purposes, and activities to capture the interest of pupils, to promote interaction, to encourage exploration and research of problems, to test the limits or boundaries of problem situations, to extend involvement in planning, executing, and evaluating the learning experience; and through emphasis on group-centered activities to help pupils objectify their own emotional problems by aiding them to identify with reality or with appropriate fantasy.

Implicit in this approach to curriculum is the assumption that knowledge does not exist as something separate and apart from the life experience of the individual; children learn new facts and concepts and employ new information in relation to other facts, skills, and concepts already incorporated as a part of their previous experiences.

a. Group Activity - It is assumed that learning which stems from group activity and initiative represents an investment of the individual in group endeavor. Group activity tends to be more satisfying and rewarding to the learner as well as more influential in modifying behavior in the group situation.

In considering the general need for and value of pupil-initiated and pupil-centered activities for all pupils, the special need for and value of such curricular focus for the emotionally handicapped child becomes immediately apparent. The power of the peer group in influencing the values, beliefs, attitudes, and behavioral norms of school children is well documented in the research literature. As children learn to know themselves through the people around them, they normally come to rely more on the opinions of their age-mates and less on the opinions of their parents or teachers. With the discovery that various age-mates differ in their perceptions of each other, they learn to check the appraisals of their peers against their self perceptions. Thus, they develop a self concept which is a balanced estimate of how others perceive them and of how they perceive themselves.

By the middle years of childhood the relationships a child maintains with his peers can be used as a rough measure of his social and emotional maturity. Evidence from school records, teacher, principal, and visiting teacher opinions, as well as more objective data from psychological tests indicated that the emotionally handicapped children in this study had in the past made slow progress in these and related aspects of personal-social development. They tended to be rejected by their age-mates, to be anxious, self-centered, isolated, withdrawn, angry, and unhappy. Whether their behavior was overtly hostile, aggressive or withdrawn, anxious or apathetic, such children tended to disrupt free communication between group members and to disturb group cohesiveness and morale in the instructional setting.

Their "problem" behavior created, as well as revealed, classroom difficulties which interfered with effective human relationships and therefore with learning.

Teaching strategies were investigated in which these disturbed youngsters, through repeated practice in real-life environments, were allowed many opportunities to interact with peers and adults and to resolve and deal with social problems as well as with their own problems. In this frame of reference, the environment was manipulated to prepare these youngsters to be individuals as well as social beings, and to help them to evaluate their society and its relationship to their own lives. The project effort was directed toward the creation of a learning environment in which troubled children, while under the guidance of professionals who understood, respected, and accepted them, might develop a sense of their relationship with their culture and of their responsibilities as contributing members of a social group. While many of the emotional problems that interfere with learning exceed the scope of the school, this project studied the question of whether modifications in curriculum and methodology could serve a psychoeducational function. The teaching strategies investigated to this end were the simulated environments, with concurrent teacher-psychologist consultation and supervisory services.

b. Simulated Environments - In general, individuals learn when they are placed in an environment which has contingencies for their behavior. In practice, people cannot be placed in real-life environments, but simulated environments can be constructed.

The simulated environments technique is not unique to this study. The Armed Forces have for many years utilized "war games" to simulate war situations. In recent decades industry has used simulated games for training managers and other personnel. More recently some sociologists and educators have developed games and other simulated techniques for use in the schools. Coleman and Boocock (1965) report that initial experimentation in the use of games with simulated environments indicates that this technique produces two major forms of learning: (1) intellectual learning which involves the content of the activity and (2) social learning which includes learning about others, about one's self, and about the expectations and obligations of role relations in which one engages. Coleman further states that the simulated games appear to be highly motivating and enable the pupils to develop greater competence in coping with their environment. Cherryholmes (1966), in his evaluation of six studies to determine the effectiveness of educational simulations, found that although students participating in a simulation did reveal more interest and motivation (i.e. learning related to social-psychological interactions) in a simulation exercise than in more conventional classroom activities, they did not seem to learn more facts or principles in the simulated activity than they did by conventional methods.

Cherryholmes offered as a possible explanation the fact that the simulations in the six studies were *presented* to the participants, and that students did not discover *structural* relationships in the simulations.

The simulations, as utilized in this project, have been modified considerably to allow the students to play a role in designing the simulations.[1] Although the "game" idea [2] is incorporated for reinforcement of learning in many instances, the design follows a set of procedures which serve as an extended preparation for the role-playing activity. Although role playing is only one of the steps included in the utilization of the simulations, it is the core around which the technique revolves. It appears to be of value to the disturbed child because it frees him to explore new situations in real-life environments and to experience them from a new point of view. It allows him to assume a different identity for a brief time and frees him from the limitations and biases of his own ego. Having for a time set aside the negative self-concept, he is able to ventilate and release deep feelings which he might consider forbidden in his own role. Experimentation with this technique indicates that the disturbed child, when he reassumes his own identity, can relate his newly-gained insights to his own life situation.

II. METHOD

A. General Research Strategy and Procedure

The Glen Burnie area of Anne Arundel County, Maryland, was chosen for this three-year investigation because (1) it contains a representative population - pupils from urban, suburban, and rural areas, (2) the superintendent of schools and his staff offered their facilities and participating teachers, and (3) the area is near the Baltimore diagnostic and clinical centers.

1. *Identification and Grouping of Project Population* - Approximately 25% of the Anne Arundel County third grade population or 1,000 pupils in the Glen Burnie area were screened in March and April 1964, utilizing the Bower and Lambert screening process (1962). To identify, further, the children who would participate in the project, intensive diagnoses followed the screening process. The tests administered included pediatric, psychological, neurological, and psychiatric; speech, hearing, and vision when indicated. Sixty-four of the identified population, whose clinical evaluations

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[1] For examples, see Appendix, pp. 78-79

[2] For examples, see Appendix, p. 88

did not present evidence of neurophysiological dysfunction or subnormal intelligence, were randomly assigned to the following treatment groups for the fourth and fifth grade programming phase:

Cell A. Twenty members of the project population were placed in two special classes (N=20). A teacher and an aide were assigned to each of the classes of ten children. These two groups received a modified curriculum utilizing the simulated environments technique with primary emphasis placed upon interaction in small group situations.

Cell B. Three members of the project population were assigned to each of four regular classes of thirty pupils including the above emotionally handicapped children (N=12). These regular classes received a modified curriculum utilizing the simulated environments technique with primary emphasis placed upon interaction in small-group situations.

Cell C. Twenty members of the project population were placed in two special classes (N=20). A teacher and an aide were assigned to each class of ten children. These classes received a curriculum based on a contrast environment with primary focus placed upon individual instruction in a highly structured environment.

Cell D. Three members of the project population were assigned to each of four regular classes of thirty pupils including the above emotionally handicapped children (N=12). These regular classes received a contrast environment utilizing whatever curricular methods and techniques were available in their schools or courses of study.

Table I illustrates the resulting cell layout involving 64 subjects.

TABLE I

Treatment and Grouping of 64 Emotionally Handicapped Pupils [1]

Treatment	Special Class	Regular Class
Simulated Environments	Cell A 20 subjects (2 classes of 10 each)	Cell B 12 subjects (3 in each of 4 classes of 30
Contrast	Cell C 20 subjects (2 classes of 10 each)	Cell D 12 subjects (3 in each of 4 classes of 30)
Total	Subjects 40 Teachers 4 Aides 4	Subjects 24 64 Teachers 8 12 4

The above subjects were screened from eight elementary schools and placed in six selected elementary schools. The experimental and contrast groups were placed in different schools (three for each treatment). During the third year phasing out period twelve schools were represented because of new school construction and the return of some subjects to their neighborhood schools.

2. Subsequent Grouping (1966-67) - The project population was reevaluated in May 1966 and those children whose evaluations indicated that their academic achievement and behavioral changes would enable them to adjust to a regular classroom environment were placed in regular sixth grade classes for the 1966-67 academic year. In this manner, fourteen special class subjects (six from Cell A

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[1] The numbers in the cells were reduced during the study through the loss of pupils from the project for various reasons unrelated to the experimental treatments.

and eight from Cell C) were placed in regular classes with the provision that they might return full or part time to the special classes (now called resource rooms).

The special class subjects (Cells A and C), whose evaluations indicated that their academic achievement and behavioral deviations militated against full-time placement in the regular classroom, remained in the resource rooms and were scheduled for at least one period each day in the regular class for social studies. Other periods were scheduled during the year upon recommendation of the resource room teachers in both the experimental and contrast treatment groups.

The same evaluative procedure was utilized for the emotionally handicapped children located in the regular classes. There were six (three from Cell A and three from Cell B) of these children whose evaluations indicated the need for part-time placement in the resource rooms. Each child was scheduled for the social studies period in the regular classroom and, upon the recommendation of the teacher, was returned to the regular classroom for other subjects either part or full time.

The simulated environment and the contrast treatments in the social studies were administered in the regular classrooms during the third year of the project. The resource rooms were used primarily for remediation in the academic subjects, for help in completing assignments made in the regular classroom, for educational games, and as "home base" for those pupils who continued to need the services provided by a small class. The intitial emphasis on group instruction (Cell A) and on individual instruction (Cell C) was continued during the third year in the resource room.

3. General Staff Functions - The chief investigator and the coordinator supervised the experimental teachers, aided in developing curricular materials, demonstrated the experimental technique in the classrooms, and participated in workshops and in-service training meetings.

The chief psychologist acted as consultant to all project teachers, on a scheduled and emergency basis, to aid them in understanding and managing deviant behavior. He also administered projective tests and, together with the assistant psychologist, evaluated the findings. When requested by the parent or the staff, the psychologists were available for parent interviews and counseling. During the third year of the project, parents of pupils who had not shown the expected improvement or had declined in the various measures of academic achievement and/or personality function were invited to attend group discussions with the psychologist acting as group leader and the public health nurse as observer. There were eight sessions scheduled during the year and eight to ten parents were present at each session. The exchange of information concerning parental methods of child-rearing was emphasized in each of these sessions.

The public health nurse acted as liaison between the local health department and the staff, coordinated the activities of the school nurses who were assigned to the schools, made home visits to collect data for the comprehensive history of each subject, arranged medical consultations for students and parents, and acted as observer for the parent discussion sessions.

Special consultants serving on the staff included specialists in the education of the emotionally handicapped, a pediatrician, a psychiatrist, and a neurologist.

The local supervisor of special education supervised the teachers in the special class contrast group while the area supervisors were responsible for supervision for the regular class teachers in the contrast treatment.

4. Teacher Selection - The local assistant superintendent of elementary schools and her staff selected the teachers for all groups. The criteria for selection of teachers included:

a. Willingness to experiment

b. An understanding of child development principles

c. A flexibility in choosing teaching strategies

d. Demonstrated ability to work successfully with other teachers and the administrative staff

All teachers selected were assumed to be equally competent. The twelve regular classroom teachers were randomly assigned to the four special classes and eight regular classes. The four teacher aides were randomly assigned to the four special classes. The teachers remained with their respective groups for the first two years of the project with but two exceptions. One special class teacher assigned to the contrast group resigned at the end of the first year for reasons not related to the project; one regular class teacher assigned to the experimental group moved to another area of the county and requested an assignment in that area. Upon recommendation of the principals concerned, both teachers were replaced by regular classroom teachers.

5. Teacher Training - In 1964 and 1965 four-week summer workshops were held at Towson State College for orientation and training of the regular classroom teachers and other staff members who participated in the project. The following types of training were included:

a. Orientation to the research design

b. Instruction in characteristics of emotionally handicapped children and in ways of handling their deviant behavior

c. Instruction in remedial techniques for the academic subjects

d. Instruction in the simulated environments technique (for experimental teachers and staff)

e. Development of curricular materials

f. Observation and practice teaching with emotionally handicapped children

In 1966, seventeen sixth grade teachers, who were newly assigned to teach the experimental and contrast treatments in the regular classrooms, attended a one-week workshop. The same type of training was included with these exceptions: (1) observation and practice teaching opportunities were not available, and (2) curricular materials utilizing the simulations were available as samples for the experimental teachers.

At the beginning of the third year of the project, the special classrooms became resource rooms, staffed by the same teachers, for the phasing out period.

6. Parent Participation - In all groups parents participated in the following general manner:

a. Parent-teacher conferences

b. Home conferences with teachers

c. Psychological consultation when problems arose

d. Parent group discussions - During the third year of the project the parents of those students who had not shown improvement or who had declined in the various measures of academic achievement and/or personality function were invited to attend group discussions. The group was composed of eight to ten parents who met informally for eight sessions of one hour each, with the psychologist as group leader and the public health nurse as observer. The exchange of information concerning parental methods of child-rearing was the focus of the discussions.

B. Curriculum

1. Simulated Environments Technique[1] (Cells A and B) - This program of research employs a simulated environments technique, developed through the unit approach, in teaching social studies to emotionally handicapped elementary school children in regular and special classes. Social studies content was chosen to implement the simulated environments technique because of the unique attention given to the processes of living and working together, and the use of the environment in meeting basic human needs. Further, the unit organization is a structure which is employed by the majority of teachers in teaching the social studies. Thus, the experimental technique is an extension of an established method of teaching.

The unit permits the adaptation of the content to the interests and experiences of the group, the incorporation of new and innovative materials and techniques, and revision based on group evaluation; moreover, it provides opportunities for the functional use of basic skills. The unit organization lends itself to the use of the simulated environments technique as an operational base for planning, guiding, and evaluating group activities.

In practice, students cannot be placed in real-life environments, but simulated environments can be constructed. This technique is a combination of teaching strategies which bring situations and problems within the cognitive structure of children. It has the added advantage of involving them emotionally. The strategies employed are included in a set of procedures[2] which constitute an extended preparation for role playing. Problems are discussed in large and small groups. The students begin to react to possible solutions as the teacher stimulates the class or groups to explore the possible solutions. The problem is analyzed, consequences are anticipated, and ideas are expressed. Pupils choose the roles they wish to assume, set the stage for the role-playing activity, and enact the problem situation. Tentative solutions are reached, and evaluations are made by the participating observers. The teacher remains noncommital when possible solutions and evaluations are proposed by class members. As further reinforcement and group activity, educational games[3] are utilized as culminating activities.

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[1] For examples, see Appendix, p. 71

[2] For examples, see Appendix, pp. 72-73

[3] For examples, see Appendix, p. 88

2. Contrast Environments - The four regular classes (Cell D) utilized methods prescribed by the Anne Arundel County social studies guides. The methodology reflects a traditional type of programming, i.e. the use of basic textbooks, total class and individual participation, total class and teacher planning, incidental and group work, directed reading activities, etc. The teacher, in this setting, appeared to assume the role of disciplinarian and information expert.

The two special classes (Cell C) have utilized methods and techniques similar to those proposed by Cruickshank, et al (1961) and Haring and Phillips (1962), i.e. reduction of environmental stimuli, a structured academic program, and planned routine with emphasis on individual assignments and instruction in the social studies and other academic subjects.

C. Analysis of Data [1] For several of the behavioral and achievement variables, namely, the three SAS, the seven ITBS, the nine WISC subtests, and one SCAL variable, a two-way analysis of variance was applied to the scores of the subjects as arranged in Table I. Thus, F-values were derived to test statistical significance of row (simulated vs. contrast treatment) and column (regular vs. special or "class size") effects as well as their interaction. To this end a standard Multivariate Analysis of Variance program [2] was implemented utilizing the computing facilities of the University of Maryland. This allowed the use of any combination of covariates for the analysis of each variable.

For the interpretation of final results, the most meaningful covariate to use in analysis of a given variable is the corresponding 1964 (pre-test) score for that variable; using additional covariates usually results only in a reduction of the degrees of freedom for error and a loss of precision. The choice of a single covariate represents a change from the use of multiple covariates for the analyses described in the Interim Report (1966) and may result in some slight differences in results. Of special note is the fact that in the case for which the question was investigated the addition of the 1964 Lorge I.Q. as a covariate did not affect the results.

Of the sixty-four subjects, eighteen are female and this number was considered sufficient to test the significance of sex difference. Therefore, the data were also examined by a three-way analysis of variance with "Sex" as the third factor. This effect was not statistically significant and did not alter the findings with respect to the main effects of interest. Thus, these results were not reported.

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[1] For description of tests and scales, see Appendix, p. 50

[2] Multivariate Statistical Programs, Dean J. Clyde, Elliott M. Cramer, Richard J. Sherin, Biometric Laboratory, University of Miami.

In addition, the effect of being in different classes within a cell was analyzed as a nested (hierarchical) "Teacher" effect. The variance between teachers (or classes) within a cell was often statistically significant but did not alter the findings with respect to the treatment effects. These analyses are not included in the report.

For the analysis of variance to be appropriate each variable is assumed to be normally distributed with the same variance within each cell. This question was investigated by applying Bartlett's test for the homogeneity of variance [1] (which also tests normality) to a random selection of the variables and by visually examining the within-cell variance for the other variables. The assumptions were not always strictly met but the F-test is known to be robust to departures from the assumptions [2] and the variables were not found to be grossly inappropriate.

The projective test ratings and the Behavior Rating Scale (BRS), however, cannot be assumed to be measured on an interval scale. Therefore, contingency tables were compiled for each of the subtests of these scales and calculated χ^2s were examined to test whether scores are independent of cell placement.

III. RESULTS

A. Analysis of Variance

1. Social Awareness Scale - Scores for the three SAS variables were obtained in November 1964, May 1965, May 1966, and May 1967. The analysis of variance was carried out for each variable using the May 1966 and May 1967 data. The single covariate used was the corresponding score of November 1964. Both analyses showed a significant treatment effect ($P < .01$) favoring the simulated environments groups for each of the three subtests. Analysis of variance tables are presented in Tables I, II, III of the Appendix, pp. 28-30.

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[1] Experimental Design in Psychological Research; Allen L. Edwards, Holt, Rinehart and Winston, 1960.

[2] The Analysis of Variance; Henry Scheffe, John Wiley and Sons, Inc., 1959.

2. Iowa Tests of Basic Skills - The seven ITBS variables were measured in January 1964, January and October 1965, May and October 1966, and May 1967 using different forms of the test for each testing period. The analysis of variance was carried out for the 1966 and for the 1967 data using the corresponding 1964 score as the covariate.

In 1966 the only significant effects were Class Size (favoring special class) for the Reading Comprehension subtest ($P < .05$) and for the Arithmetic Concepts subtest ($P < .01$). This finding differs from the results described in the Interim Report (1966) because of the use of different methods of analysis as described above in the Method Section II. C., "Analysis of Data." In 1967 Class Size is again significant for the Reading Comprehension subtest ($P < .05$), but here the Arithmetic Concepts subtest shows a significant treatment effect favoring contrast groups ($P < .05$). Because of these unusual results for the Arithmetic Concepts subtest the cell means were examined; the examination showed no definite trend or pattern among the cells for the three-year period. (See Table II.)

TABLE II

ITBS ARITHMETIC CONCEPTS SUBTEST - Cell Means

	A	B	C	D
Jan. 1964	35.6	36.6	34.0	34.8
Jan. 1965	43.1	39.9	44.0	43.3
May 1966	57.4	52.7	57.9	53.1
May 1967	61.0	64.9	68.2	66.1

Analysis of Variance tables are presented for the 1967 data in Tables IV to X in the Appendix, pp. 31-37.

Each school year the ITBS is given to all children in the county school system. This test was administered in January 1964 and October 1966. Therefore, each of the cells could be compared to the county norm with respect to the gain made during this period for each of the ITBS variables. (See Table III.) Student's t-test was used to determine whether the gain for any of the cells was significantly different from the county mean gain which was taken as a fixed parameter. The important finding here is that the average of the cell mean gains was equal to or exceeded the county mean gain for that variable, with the exception of the Spelling subtest.

TABLE III

CELL AND COUNTY MEAN GAIN SCORES, JANUARY 1964 - OCTOBER 1966

	ITBS Variable						
	V	R	SP	WS	AC	AP	C
County	21.9	22.6	26.2	26.0	21.5	24.0	23.7
Cell A	27.4*	26.3	25.7	26.3	23.4	24.8	25.7
Cell B	27.0	25.9	24.8	24.8	18.6	27.4	25.3
Cell C	28.4*	32.4*	22.2	30.6*	28.1*	28.2	29.3*
Cell D	22.7	20.0	21.2	24.9	22.2	28.5	23.0

* Significantly different from county norm as determined by 2-sided t-test with $P < .05$, d.f.=56.

3. *Wechsler Intelligence Scale* for Children - Scores were obtained on the nine WISC variables in May 1964 and May 1966. The analysis of variance was carried out for each variable using the 1966 data with the corresponding 1964 score as a covariate. Treatment effect favoring the simulated environments groups was significant ($P < .01$) on the Vocabulary subtest and on the Block Design subtest ($P < .05$). Class Size effect was significant ($P < .05$) favoring the special classes for the Comprehension and Verbal I.Q. subtests. Analysis of variance tables are presented in Tables XI to XIX of the Appendix, pp. 38-46

4. Self-Concept as a Learner Scale - Scores were obtained in September 1964, May 1965, May 1966, and May 1967. The analysis of variance was carried out on the data for May of each year using the September 1964 score as a covariate in each case. There were no statistically significant effects with respect to the 1965 data. The 1966 scores showed a significant Class Size effect ($P < .05$) favoring the special classes. However, this effect was not significant for the 1967 data, but there was a significant treatment effect ($P < .01$) favoring the contrast groups. Because of the differing results, the cell means were examined for each of these sets of data. There is no evidence of a definite trend or pattern among the cells for the three-year period. (See Table IV.)

TABLE IV

SCAL Cell Means

	A	B	C	D
September 1964	112.2	113.6	112.0	109.9
May 1965	116.5	110.1	109.8	111.2
May 1966	117.8	108.3	119.9	113.3
May 1967	113.8	112.8	121.4	120.5

Analysis of variance tables are presented in Table XX of the Appendix, p. 47.

B. Non-Parametric Analyses

1. Behavior Rating Scale - Ratings were made on the five BRS variables in October 1964 and April 1967. χ^2s were computed for contingency tables constructed as described in Table XXI of Appendix, p.48. These indicate that for each variable there are no significant differences among the cells, but that there is a significant increase in scores between 1964 and 1967 for all cells. The contingency tables showing this latter effect are presented in Tables XXI to XXV of the Appendix, pp. 48-49.

2. Projective Test Ratings - The Rorschach, T.A.T., Bender-Gestalt and Wechsler scales were evaluated, taking into account changes that occured over the three-year period. Scores were determined by rating each child on a seven-point scale for evidence of such factors as ego strength, adequacy of defenses, ability to relate to others, richness and variety of responses, and ability to adapt to the environment. Each of the tests was carefully weighed for evidence of change for each child and the results were pooled and rated on the scale to summarize gains or losses.

These ratings were computed in 1966 and again in 1967. In June 1966 each psychologist selected at random ten children who had been evaluated by the other psychologist and, without prior knowledge of the rating assigned, made his own rating. Thus, twenty of the fifty-eight records were examined independently to establish rater reliability. An agreement of 80% was reached and the discrepancies were discussed and resolved. This was accepted as a reasonable agreement between raters, and the ratings were pooled. Since there were more than 20% of chi square cells which had expected frequencies of less than five, categories were combined in order to eliminate them. A three-cell arrangement which was labeled "decline in function," "no change," and "improved function" was the result. The subjects were rated by only one of the psychologists in 1967.

A χ^2 was calculated comparing the simulated and contrast groups with a resultant $\chi^2 = .111$ and comparing the special classes with the regular classes $\chi^2 = 5.66$, both of which were nonsignificant. It is noteworthy that over the three-year period thirty-eight of fifty-two subjects improved in personality function, eleven remained at about the same level, and three declined.

A Mann-Whitney U Test was computed on projective test ratings for the group of children remaining in special classes and for the group selected by teachers to be phased into the regular classroom during the third year. A $P = .015$ was obtained, favoring the subjects who went on to regular classes, suggesting that the teachers made choices independently which significantly agreed with psychological test findings.

IV. DISCUSSION

Differences among groups of subjects, as measured by the Social Awareness Scale, indicate a positive effect in those groups utilizing the simulated environments treatment. In this treatment emphasis was placed on group processes rather than on total class and individual participation, on group interaction in cooperative endeavor rather than on isolated individual contribution to the total group effort, and on pupil involvement in the planning, production, and evaluation of the learning experiences. Pupils in this situation appeared to gain in both self-acceptance and acceptance of others.

The teaching strategies employed enabled the teacher to assume the role of a guide or helper and observer who stimulated and directed human relations, built group cohesiveness and morale, encouraged and supported individuals in group effort, and facilitated problem solving approaches to real-life situations in learning. Thus, the teachers of the experimental groups not only had more opportunities to observe and evaluate behavior, but utilized these evaluations more effectively in employing the teaching strategies to enhance the psychoeducational learning experience. The SAS indeed appears to have measured these differential effects between the contrast and experimental groups. The factors in the scale appear to be related to volitional, conscious acts of judgment based on effective use of such factors as initiative, cooperation, tolerance, and intellect. These conscious acts of goal-directed behavior may be subsumed under the heading of "adaptive behavior."

The above findings are in contrast to the results of projective tests, which reflect deeper levels of personality functioning, and which do not show the same distribution among the cells as seen on the SAS scores. Thus, one may presume that the teacher's observation and evaluation of overt behavior related to these factors is a more sensitive index of such personality variables than are the projective tests.

Although no differences were found among the cells on the projective tests, this study indicates close agreement of projective test ratings and teacher perception in determining which of the project population could move on to full-time placement in the regular classroom. The subjects (N=14) selected to be phased out at the end of the two years had significantly higher scores than those subjects selected to participate part-time in the resource rooms for the third year. The Mann-Whitney U test yielded a significant difference ($P<.015$) between the groups. The children screened out of special classes had a higher average I.Q. by eight points on the Full Scale WISC and a higher average reading level on the Informal Reading Inventory by one and one-half grade levels.

The psychologists' and the teachers' evaluations indicated that in general these subjects exhibited more compulsive and overtly hostile behavior than did those subjects assigned to the resource rooms. Nevertheless, those selected to return to the regular classroom had learned to ventilate and work out their feelings, while the group needing more time in the small classes of the resouce rooms appeared to be more hyperactive, depressed, anxious, and withdrawn. Children screened out for placement in regular classes, then, appeared to differ on the basis of how well organized and aggressive they were from those remaining in the resource rooms, the latter continuing to be less able to cope with their environment and less methodical in their approach to the learning task.

Though the initial screening had portended to eliminate children showing neurophysiological dysfunction, such dysfunction became evident later. Of the twenty-four children remaining in resource room classes for the third year of the project - or referred for further resource room placement by teachers - eighteen subjects, either by test results or observable behavior, demonstrated traits often found in minimally brain-damaged children; only two of the fourteen phased out to regular classes displayed such traits. Subsequent EEG's were ordered on eleven of the twenty-four, and seven of these showed patterns which were compatible with "mild, diffuse brain damage." Although firm diagnoses of brain damage could not be made in each case, the evidence of such a diagnostic finding was substantial and assumed to indicate a strong possibility in these children of central nervous system dysfunction not revealed by the initial screening. In spite of these later results, the children assigned to the resource rooms in the third year showed improvement in academic achievement, personality functioning, and behavior patterns, although at a slower rate.

Although improvement in personal-social development was noted in the majority of the children, the scores on the seven-point scale represent different degrees and levels of function. A child with severe emotional illness may have improved with a rating of 3+ on the projective tests, while a child less disturbed may have shown an improvement rating of 1+; however, the latter child would be functioning at a level well above the former. Thus, point-to-point comparisons cannot be made, nor can scores be summed and averages obtained. The factor is non-parametric and must be viewed only in the light of the individual child's total functioning.

For example, B.D. with a 3+ score, was one of the most disturbed children in the sample. His previous history showed much evidence of psychotic episodes, firesetting, and withdrawal. There was a previous psychiatric evaluation recommending admission to a residential treatment center. He felt rejected by his mother, was enuretic, and had a poor sexual identification. B.D.'s I.Q. scores over the three-year period showed a gain of 20 points on the Full Scale WISC. Projective testing revealed less constriction, more spontaneity, and more insight. The teachers' ratings agreed with these impressions. His ITBS achievement score showed a gain of four years and two months over the three-year period. He no longer sets fires, is not enuretic, and, although he continues to need much support from peers and adults, is better able to cope with his environment.

L.D., with a 1+ score, is a twin whose speech pattern was unclear until he was about three years old. Although a psychiatrist's evaluation suggested minor evidence of brain damage, an EEG did not support this impression. His I.Q. score declined slightly over a two-year period, but remained at the average level. Initially, teachers saw him as aggressive, then as somewhat withdrawn, and later as a constricted boy who appeared bored. The home was marked by frequent arguments between the parents, both of whom belonged to Alcoholics Anonymous. However, he showed few signs of turmoil in his school work and behavior. He seemed to have a sense of fatalism concerning his home life. At the end of the project, he was seen by his teachers as a more mature, likable child, who was a leader at times, although still a "loner" in some ways. His gains on formal tests and ratings were more modest in comparison with B.D. but no less meaningful or important to him. Ratings cannot be compared on a one-to-one basis and therefore can be quite misleading.

There was little evidence on the Self-Concept as a Learner Scale to suggest that emotionally handicapped children on the average can realistically appraise themselves. This was evidenced by the lack of a definite trend or pattern in scores over the three-year period. In addition there was disagreement between teachers' judgment and self rating, the teacher perceiving the child more positively in relation to learning than the child perceived himself.

This criticism is parallel to the conclusion stated by Bower (1961) that the self-test contributed practically nothing to the process of in-school screening of the emotionally handicapped. The failure of this instrument to measure any differential improvement may be due to its insensitivity to the factors that were being stressed.

Contrary to expectations, there were no significant differences among the cells on the Iowa Tests of Basic Skills, with the exception of Reading Comprehension which favored the special classes. It had been anticipated that the special class subjects (Cell C) would show more significant gains in the academic subtests since the emphasis was placed on individual instruction.

When experimental and contrast groups were compared on an informal reading inventory which measured vocabulary and comprehension, it was interesting to note a six-month higher mean gain favoring the experimental groups. However, there was little difference between the experimental special and regular classes.

Although the Behavior Rating Scale appears to be a valuable instrument in helping a teacher make objective observations about behavior, it appears to be an inappropriate instrument for making analysis of behavior among groups of children. Teachers tend to focus upon hyperactive and aggressive acts rather than on the withdrawn and/or depressed patterns of behavior. For example, one teacher remarked that she could not record one child's behavior because "all he did was day dream and stare out the window." Consequently, any summary analysis comparing behavior tends to be distorted.

It is possible that factors other than the treatments could contribute to observed changes in the subjects' performance on the various measures. These seem worthy of consideration:

Biased selection of treatment groups - even though random assignment was used in cell placement of the children, there may have been initial differences among the groups; this possible bias is taken into account by use of the initial score on a measure as a covariate in its analysis.

Maturation of subjects - All subjects were approximately the same age and there is no evidence to suggest that effects of maturation were not uniform among the cells. Consistent increase in skills and abilities would be expected throughout the sample. Age-correction is utilized in most of the measures studied.

Intrinsic environmental factors - Unexpected factors such as illness, loss of family members, or personal injury could not be controlled and may possibly have created conditions which resulted in some reduction of scores; for this study such factors appear to be minimal.

Teacher differences - By using the "nested" design discussed in the section "Analysis of Data," a significant difference was found among teachers with respect to the performance of their classes on some of the measures. However, because of the random placement of the teachers among the cells, this variance did not bias the findings to any meaningful extent.

The placebo effect - This effect must be considered to be uniform throughout the cells. Such factors as enthusiasm for a new technique, expectation of improvement, and the desire to conform to the authorities' views may all contribute to positive changes. This study, because of the loss of controls by students' moving out of the county and changing schools, did not have a direct control group for this factor, although such a control was planned. However, comparisons were made between the experimental groups and county norms on the Iowa Tests of Basic Skills. (See Table II.) The placebo effect, although not tested by pure controls in this study, would appear to have made a contribution to improvement in all cells. In future studies, it would be important to test this hypothesis by including a group of disturbed children as controls for placebo effect. The difference between Cell D (conventional large classroom) and control scores would then be a measure for this effect.

One of the most gratifying aspects of the project was the involvement of the children in the development and implementation of curricular units and materials utilizing the simulated environments technique. Sample units, games, and other materials were prepared initially and presented to teachers as a working base. The creativity and resourcefulness of both teachers and children in field testing, developing, and implementing this technique exceeded all expectations. The interest and motivation of the pupils was evidenced in their reluctance to terminate a simulation. Though the recommended time for a continuous activity is thirty to forty-five minutes, two classes were observed attending to a simulation activity for over an hour.

Comments from pupils concerning their involvement are evidence of their motivation. A flavor of this is provided by some of the statements made for a simulated TV telecast in which the pupils played roles of "students who had completed two years using simulations in social studies." Some of the statements from the tape-recorded simulation are as follows:

"I don't feel guilty every time I make a mistake anymore."

"We learn a lot from each other . . . . Last year all the teacher did was talk, talk, talk! This year our teacher lets us do most of the talking. I like that."

"I didn't know social studies could be so much fun . . . this way you don't have to read and write all the time."

"Do we have to go out? /for recess/ Let's finish this broadcast."

"In the third grade 'Tom' was always making fun of me. In our work this year we learn how to get along and not always criticize each other . . . he's nice to me now."

V. CONCLUSIONS AND IMPLICATIONS

This three-year study has provided many insights concerning psychoeducational treatment of the emotionally handicapped child. Though the original design was retained throughout for statistical results, interim evaluations suggested a modification of design for operational purposes. To the experimental and contrast treatments a third situation was added. The modification not only facilitated phasing out of the federally-funded project, but also suggested a way to lend support to emotionally handicapped children in future programs as they move from special treatment to regular classes. The data in this study suggest the following conclusions:

(1) The simulated environments technique is significantly effective in developing better interpersonal relationships, personal effectiveness in a social situation, and ability to apply problem-solving skills to social issues.

(2) The teacher's key role in rating and evaluating individual behaviors is confirmed by close agreement between teacher perception and psychologists' evaluations.

(3) There is need for initial and continuing team evaluation as indicated by the failure of the diagnostic instruments to screen out subjects whose later evaluations suggested diffuse brain damage.

(4) Teachers, properly motivated, with a minimum amount of training in the education of the emotionally handicapped can provide a climate where gains can be made in academic achievement and in behavior patterns.

(5) The simulated environments technique can be beneficial to those children in the regular classroom who have not been identified as emotionally handicapped.

(6) For the emotionally handicapped child who can participate part-time in the regular classroom, the resource room placement appears to provide needed support during the transition period.

VI SUMMARY

Having accepted their role in the education of the emotionally handicapped, educators then appear to be faced with two pertinent areas of concern centering around (1) deciding what type of services to provide and (2) designing curricular content that will give equal consideration to emotional difficulties and related educational problems.

This three-year study investigated the effectiveness of a simulated environments technique with emotionally handicapped elementary school children placed in both regular and special classes. This technique consisted of a combination of teaching strategies emphasizing group-centered activities. The strategies employed were included in a set of procedures implemented in the unit framework of social studies content. The sample was screened in the spring of 1964 from approximately 1,000 third grade pupils from the Glen Burnie area of Anne Arundel County, Maryland. This population contained pupils from urban, suburban, and rural areas. Sixty-four of the identified sample whose clinical evaluations did not present evidence of neurophysiological dysfunction or subnormal intelligence were randomly assigned to the following treatment groups: four experimental regular classes and two experimental special classes; four contrast (conventional) regular classes and two contrast special classes. Comparisons were made by analysis of variance and other appropriate statistical procedures to determine differences in academic achievement and measures of behavior.

With the exception of reading comprehension, which favored the special classes, there were no significant differences among the groups on the ITBS with respect to changes in academic achievement. The important finding was that, with the exception of the spelling subtest, the average of the mean gains for all groups exceeded the county norms on each variable.

Significant gains were made, favoring the experimental groups, in interpersonal relationships, personal effectiveness in a social situation, and abilities to use problem-solving skills as measured by the SAS. No significant differences, however, were found between special and regular class cells. On the projective tests and other behavior rating scales, such as Behavior Rating and Self Concept as a Learner Scale, no significant differences among the cells were found, though there was improvement in all cells. There is little evidence to suggest that emotionally handicapped children can realistically appraise themselves; no definite trend or pattern in SCAL scores over the three-year period could be noted; nor was there any degree of agreement between teacher judgment and self rating. The teacher tended to perceive the child more positively in the learning situation than the child perceived himself. The study does confirm the teacher's key role in rating and evaluating individual behaviors as evidenced by close agreement between psychologists' evaluations and teachers' ratings. There is sufficient evidence in the objective data and subjective observations, such as comments from children, teachers, and principals in the participating schools, to encourage further study and application of this treatment with larger numbers of subjects.

In addition to the quantitative data derived from this study, certain benefits accrued for participating pupils and teachers. Over 600 children in regular classes, in addition to project subjects, have received the experimental treatment over the past three years. Twenty-three regular classroom teachers have had training and experience in the use of the simulated environments technique and minimal training in the management of emotionally handicapped children. From this nucleus should grow a larger corps of teachers capable of employing psychoeducational techniques in an increasing number of classrooms for an increasing number of students.

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APPENDIXES

TABLES

(ANALYSIS OF VARIANCE)

TABLE I

SAS Interpersonal Relationships

	1966			1967		
Source of Variation	d.f.	M.S.	F.	d.f.	M.S.	F.
Treatment	1	223,698.5	22.89**	1	228,514.4	36.29**
Class Size	1	20,292.1	2.08	1	9,640.9	1.53
Interaction	1	9,012.5	0.92	1	42,952.3	6.82*
Regression ≠	1	121,039.6		1	104,922.4	
Within Cells	53	9,271.2		48	6,297.4	

≠ 1964 Score used as covariate with regression coefficient 0.478 in 1966 and 0.466 in 1967.

* P < .05

** P < .01 favoring simulations treatment.

TABLE II

SAS **Personal Effectiveness**

	1966			1967		
Source of Variation	d.f.	M.S.	F.	d.f.	M.S.	F.
Treatment	1	224,391.1	26.02**	1	218,640.2	30.40**
Class Size	1	6,512.0	0.76	1	17,217.3	2.39
Interaction	1	15,016.4	1.74	1	41,414.7	5.76*
Regression ≠	1	33,878.5		1	90,353.0	
Within Cells	53	8,622.5		48	7,191.5	

≠ 1964 Score used as covariate with regression coefficient 0.365 in 1966 and 0.636 in 1967.

* $P < .05$

** $P < .01$ favoring simulations treatment.

TABLE III

SAS Problem Solving

	1966			1967		
Source of Variation	d.f.	M.S.	F.	d.f.	M.S.	F.
Treatment	1	444,076.9	49.9**	1	296,740.8	33.76**
Class Size	1	14,873.2	1.67	1	15,517.1	1.76
Interaction	1	62,735.3	7.06*	1	34,968.4	3.98
Regression ≠	1	55,323.1		1	73,549.7	
Within Cells	53	8,891.2		48	8,790.9	

≠ 1964 Score used as covariate with regression coefficient 0.589 in 1966 and 0.712 in 1967.

* $P < .05$

** $P < .01$ favoring simulations treatment.

TABLE IV

ITBS Vocabulary Subtest, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	121.0	1.21
Class Size	1	59.6	0.59
Interaction	1	39.4	0.39
Regression ≠	1	6,406.1	
Within Cells	47	100.3	

≠ 1964 Score used as covariate with regression coefficient 1.282.

TABLE V

ITBS Reading Subtest, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	339.8	3.17
Class Size	1	504.2	4.70*
Interaction	1	85.2	.80
Regression ≠	1	5,009.8	
Within Cells	47	107.3	

≠ 1964 Score used as covariate with regression coefficient 0.905.

* $P < .05$ favoring special classes

TABLE VI

ITBS Spelling Subtest, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	79.5	0.50
Class Size	1	49.2	0.31
Interaction	1	3.0	0.02
Regression ≠	1	9,397.6	
Within Cells	47	159.7	

≠ 1964 Score used as covariate with regression coefficient 1.168.

TABLE VII

ITBS Work Study Subtest, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	55.5	0.81
Class Size	1	10.0	0.14
Interaction	1	177.9	2.58
Regression ≠	1	4,554.7	
Within Cells	47	68.8	

≠ 1964 Score used as covariate with regression coefficient 1.097.

TABLE VIII

ITBS   Arithmetic Concepts Subtest, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	550.0	6.58*
Class Size	1	0.5	0.01
Interaction	1	107.0	1.28
Regression ≠	1	4,267.2	
Within Cells	47	83.6	

≠ 1964 Score used as covariate with regression coefficient 0.774.

* $P < .05$ favoring contrast treatment.

TABLE IX

ITBS Arithmetic Problems Subtest, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	203.4	1.69
Class Size	1	173.8	1.44
Interaction	1	28.4	0.24
Regression ≠	1	2,991.0	
Within Cells	47	120.4	

≠ 1964 Score used as covariate with regression coefficient 0.715.

TABLE X

ITBS Composite Score, 1967

Source of Variation	d.f.	M.S.	F.
Treatment	1	14.8	0.35
Class Size	1	98.2	2.30
Interaction	1	60.8	1.42
Regression ≠	1	6,089.4	
Within Cells	47	42.8	

≠ 1964 Score used as covariate with regression coefficient 1.218.

TABLE XI

WISC Comprehension Subtest, 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	0.2	0.02
Class Size	1	48.9	6.99*
Interaction	1	0.0	0.00
Regression ≠	1	14.5	
Within Cells	53	7.0	

≠ 1964 Score used as covariate with regression coefficient 0.197.

* $P < .05$ favoring special classes.

TABLE XII

WISC Similarities Subtest, 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	22.2	2.95
Class Size	1	25.4	3.38
Interaction	1	1.8	0.24
Regression ≠	1	103.1	
Within Cells	53	7.5	

≠ 1964 Score used as covariate with regression coefficient 0.578.

TABLE XIII

WISC Vocabulary Subtest, 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	40.0	8.97*
Class Size	1	0.8	0.18
Interaction	1	0.0	0.00
Regression ≠	1	99.4	
Within Cells	53	4.4	

≠ 1964 Score used as covariate with regression coefficient 0.439.

* $P < .01$ favoring simulations treatment.

TABLE XIV

WISC Picture Completion Subtest, 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	0.7	0.10
Class Size	1	12.2	1.67
Interaction	1	17.3	2.37
Regression ≠	1	29.7	
Within Cells	53	7.3	

≠ 1964 Score used as covariate with regression coefficient 0.297.

TABLE XV

WISC Block Design Subtest, 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	24.9	5.66*
Class Size	1	7.6	1.74
Interaction	1	0.0	0.01
Regression ≠	1	125.5	
Within Cells	53	4.4	

≠ 1964 Score used as covariate with regression coefficient 0.717.

* $P < .05$ favoring simulations treatment.

TABLE XVI

WISC   Coding Subtest, 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	0.1	0.01
Class Size	1	10.7	1.58
Interaction	1	14.1	2.09
Regression ≠	1	106.6	
Within Cells	53	6.8	

≠ 1964 Score used as covariate with regression coefficient 0.464.

TABLE XVII

WISC Verbal I.Q., 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	6.6	0.05
Class Size	1	681.7	5.03*
Interaction	1	9.9	0.07
Regression ≠	1	3,704.0	
Within Cells	53	135.6	

≠ 1964 Score used as covariate with regression coefficient 0.657.

* $P < .05$ favoring special classes.

TABLE XVIII

WISC Performance I.Q., 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	198.2	1.66
Class Size	1	55.0	0.46
Interaction	1	286.3	2.41
Regression ≠	1	2,409.9	
Within Cells	53	118.9	

≠ 1964 Score used as covariate with regression coefficient 0.471.

TABLE XIX

WISC Full Scale I.Q., 1966

Source of Variation	d.f.	M.S.	F.
Treatment	1	26.2	0.27
Class Size	1	371.3	3.82
Interaction	1	32.3	0.33
Regression ≠	1	4,428.6	
Within Cells	53	97.3	

≠ 1964 Score used as covariate with regression coefficient 0.737.

TABLE XX

SCAL

	1965			1966			1967		
Source of Variation	d.f.	M.S.	F.	d.f.	M.S.	F.	d.f.	M.S.	F.
Treatment	1	137.5	1.35	1	155.4	1.02	1	721.3	7.34**
Class Size	1	80.9	0.79	1	758.0	4.96*	1	2.0	0.02
Interaction	1	319.8	3.13	1	115.0	0.75	1	7.6	0.08
Regression ≠	1	1,819.1		1	1,723.8		1	598.0	
Within Cells	53	102.0		53	152.9		47	98.2	

≠ 1964 Score used as covariate with regression coefficient 0.347 in 1967.

* $P < .05$ favoring special classes.

** $P < .01$ favoring contrast treatment.

TABLE XXI

BRS Inability to Learn

	A1	B1	C1	D1	A2	B2	C2	D2
L	9	5	8	4	0	1	1	0
M	6	2	4	3	6	3	11	4
H	2	3	5	3	11	6	5	6

d.f. = 14
X2 = 36.7
P < .01

Note: 1,2 = L (low); 3 = M (medium); 4,5 = H (high). A,B,C,D refer to cells and 1,2 refer to the 1964 and 1967 scores. This X2 presents a test of the independence of scores from cell placement and year.

	A1	B1	C1	D1	1964 Total
L	9	5	8	4	26
M	6	2	4	3	15
H	2	3	5	3	13

d.f. = 6
X2 = 2.5
Not significant

	A1	B1	C1	D1	1967 Total
L	0	1	1	0	2
M	6	3	11	4	24
H	11	6	5	6	28

d.f. = 6
X2 = 7.1
Not significant

Note: These last two tables are derived from the first. The X2's present tests of independence of scores from cell placement within each year.

	1964 Total	1967 Total
L	26	2
M	15	24
H	13	28

d.f. = 2
X2 = 28.1
P < .01

Note: This table is derived from the last two. This X2 presents a test of the independence of scores and year. Together these last three tables analyze the first table into its component parts; if the first shows there is a lack of independence, the last three show where it is.

TABLE XXII*

BRS Inability to Build Interpersonal Relationships

	1964 Total	1967 Total
L	29	5
M	13	21
H	12	28

d.f. = 2
$\chi 2$ = 25.2
$P < .01$

TABLE XXIII*

BRS Immature Behavior

	1964 Total	1967 Total
L	30	9
M	11	22
H	13	23

d.f. = 2
$\chi 2$ = 17.8
$P < .01$

TABLE XXIV*

BRS Depressive Mood

	1964 Total	1967 Total
L	23	5
M	17	14
H	14	35

d.f. = 2
$\chi 2$ = 20.9
$P < .01$

TABLE XXV*

BRS Hypochondriasis

	1964 Total	1967 Total
L	16	2
M	13	8
H	25	44

d.f. = 2
$\chi 2$ = 17.3
$P < .01$

* See notes accompanying Table XXI

DESCRIPTION OF TESTS AND SCALES

DESCRIPTION OF TESTS AND SCALES

The Social Awareness Scale

The Social Awareness Scale (SAS) was developed by the research staff because of the dearth of test instruments designed to measure adequately the changes sought from the utilization of the simulated environments technique. Available test instruments in the social studies tend to test for the acquisition of factual information or subject matter with virtually no emphases on evaluating the psychosocial aspects of learning - assessing the ability of the child to relate to and adjust to members of his society and to resolve his own problems through the utilization of problem-solving techniques.

The SAS serves as a teacher judgment evaluation. It is designed to measure changes in (1) interpersonal relationships, (2) personal effectiveness in a social situation, and (3) problem-solving skills. The first of these three primary factors reflects the child's ability to relate to others in a group situation. Scores on this factor indicate the teacher's assessment of changes in the child's ability to interact effectively in a group situation. The second factor is related to the child's awareness of himself - his self-concept - as he reacts in a group situation. The teacher's estimation of this attitude is quantified by a rating or score. This judgment is inferred by observation of the child's performance in the group. The third factor is related to the child's ability to utilize problem-solving skills, to resolve problems inherent in the social studies area, and through practice in this procedure to develop a sensitivity to coping with his own problems and finally resolving them. Scores on this factor indicate the teacher's assessment through observation of the child's ability to apply these skills.

Iowa Tests of Basic Skills

The Iowa Tests of Basic Skills is a standard achievement test used not only to measure status on various skills as compared with class, school, county, and national norms, but to reflect growth as shown by gains in scores. Five major areas are measured: Vocabulary, Reading, Language, Work-Study Skills, and Arithmetic.

For the purposes of this study, Vocabulary, Reading, Spelling, Work-Study Skills, Arithmetic Concepts, Arithmetic Problems, and Composite Scores were obtained for the project children as well as for the normal children in the large classrooms. Comparisons between groups and for each child cumulatively were made each year.

The Wechsler Intelligence Scale for Children

The Wechsler Intelligence Scale for Children was developed by David Wechsler in 1949; it is based on extensive research and experience with the Wechsler-Bellevue Intelligence Scales. The Scale, widely employed in clinical and research work, yields not only an intelligence quotient for verbal and performance tasks but also scaled scores for as many as twelve essentially separate mental functions. A prorated score for verbal and performance sections of the test was calculated on the Comprehension, Similarities, and Vocabulary subtests, and on the Picture Completion, Block Design, and Coding tests as well. These subtests were considered to be the most useful ones in determining intellectual functioning for the sample. They refer to such mental functions as judgment, verbal abstracting, and word knowledge; attention to details, eye-hand coordination, and learning new material. Each aspect of the test cuts across other groups of factors, although in general the mental characteristic measured has some unique quality (i.e., memory, concentration, etc.).

The "deviation I.Q." and not Mental Age is the basic concept for the construction of the WISC. A child's performance on the test is compared with the average performance of other children in his own age group. The amount by which the individual deviates above or below the average I.Q. (M = 100) of individuals of his own age group is called the deviation I.Q.

For this study, comparisons over a two-year period were made on the six subtests, as well as on the Verbal, Performance, and Full-Scale I.Q.

The Rorschach Test

Developed by Hermann Rorschach in Switzerland, the Rorschach Test has been widely utilized in this country in the last thirty years; it is still being refined and studied. The purpose is essentially to provide a standardized situation in which behavior can be observed, with the assumption that it will "be possible to predict other kinds of behavior ... in other situations." [1] It provides an ambiguous stimulus situation which appears to enable the subject to reveal his unique functioning.

While scoring is of importance as "shorthand" for hypotheses or inferences about personality dynamics, for the purpose of this study, scores based on Beck's method were derived but were not analyzed formally. Rather, individual changes in such factors as content, sequence, form level, affective responses, and other

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1 Klopfer, Bruno; Ainsworth, Mary D.; Klopfer, Walter G.; and Holt, Robert R. "Developments in the Rorschach Technique." Harcourt, Brace and World, 1954.

determinants were observed and evaluated.

Though different administrators were required at different times, Beck's method of scoring was used throughout. At the end of the first two years of study, two evaluators reviewed the projective tests and carefully compared twenty of the protocols after each had rated the changes on a seven-point scale. Agreement between reviewers was 80% and differences were discussed and resolved. One of these reviewers carried out the three-year analyses on all the sample subjects.

The Thematic Apperception Test

The Thematic Apperception Test was developed by Morgan and Murray [1] in 1935; it is based on the observation that an individual confronted with an ambiguous social situation and required to interpret it is likely to reveal his own personality in the process.

It has been shown to be a useful instrument in studying child development, social attitudes and sentiments, and culture and personality. Because of individual differences, however, and the fluctuating nature of personality dynamics, both rater and repeat reliability are quite variable and a stable pattern is difficult to establish. Nor have the numerous validity studies established firm and clear evidence of its ability to measure personality variables. Nonetheless, it is considered one of the more useful methods available for assessing personality dynamics.

Five cards were selected and repeatedly administered to the children in the sample. The cards were those especially useful in eliciting stories from children. The themes in each instance were evaluated in the manner described by Tomkins [2] and applied to the interpretation of the dynamics together with the other projective instruments.

The Bender-Gestalt Test

Developed by Lauretta Bender in 1938, the Visual Motor Gestalt Test is now in general use, and has been increasingly utilized by clinicians and researchers in explaining perceptual psychology. It is based on a theory originally expounded by the Berlin school of Koffka, Kohler, and Wertheimer. In this theory, the organism reacts to a stimulus by perceiving it as a whole and responding to it as a whole. In the act of perceiving, the individual contributes to the configuration; his response, then, is the combination of "the original visual pattern, the temporal factor of becoming, and the personal - sensory - motor factor." [1] Thus, a reorganizing takes place within the individual, based on his biologically determined sensory motor pattern of action. Diagnostic inferences can be made by examining the responses, or drawings, which reveal personality features characteristic of the individual. The figures are nine of Wertheimer's original patterns. This test can be used with children and yields data on maturation, perceptual ability, and personality variables.

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[1] Morgan, C.D., and Murray, H.A. "Method for Investigating Phantasies: The Thematic Apperception Test"; Arch. Neurol. and Psychiatry, 34:289-306. 1935.

[2] Tomkins, Silvan S. "The Thematic Apperception Test"; Grune and Stratton, Inc. 1947.

The instrument was used in this study not only for diagnosis but for evaluating the child's growth as reflected in such factors as perceptual organization and sensory motor skills.

The Self-Concept As a Learner Scale

The SCAL as modified by the staff from Self-Concept as a Learner Scale developed by the University of Maryland Bureau of Educational Research Staff under the direction of Walter Waetjen is a self-rating scale. It is divided into four components: motivation, task orientation, problem solving, and class membership. The scale is included in this section of the Appendixes.

The Behavior Rating Scale

The Behavior Rating Scale is a teacher judgment rating scale developed from Bower's (1961) topic definition of behavior patterns of the emotionally handicapped. The characteristics under each topic definition on the graph Behaviorial Characteristics of Emotionally Handicapped Children were compiled by the research staff. In using the scale the teacher first tabulates the number of times a behavior occurs for each child, then makes a graph of that behavior at the end of each three-month period. Finally, at the end of the year, the teacher uses this information to rate each child on the five-point Behavior Rating Scale. The graph and scale are included in this section.

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[1] Bender, Lauretta, M.A., M.D., "A Visual Motor Gestalt Test and Its Clinical Use." New York: American Orthopsychiatric Assoc. 1938.

SOCIAL AWARENESS SCALE

MARYLAND EDUCATIONAL RESEARCH PROJECT

DATE____________________

SOCIAL AWARENESS SCALE

STUDENT'S NAME____________________

SCORING

SCHOOL________________

TEACHER'S NAME____________________

NEGATIVE POSITIVE **SCORE**

····|·········|·········|·········|·········|·········|·········|·········

0 10 20 30 40 50 60 70

DEVELOPING BETTER INTERPERSONAL RELATIONSHIPS

1. Respects the rights and opinions of others.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

2. Understands the need for rules and the necessity for observing them.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

3. Takes part in making the rules needed by the group.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

4. Accepts the role of leader or follower, as the situation requires.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

5. Values minority points of view.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

6. Distinguishes between work that can be done most effeciently by individuals and that which calls for group effort.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

7. Tolerates opposing points of view.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

8. Expresses ideas clearly and concisely.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

9. Accepts the decision of the majority.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

10. Works more cooperatively and productively.

|····|····|····|····|····|····|····|····|····|····|····|····|····|····| ______

SUB-TOTAL ______

DEVELOPING PERSONAL EFFECTIVENESS IN A SOCIAL SITUATION

SCORE

0 10 20 30 40 50 60 70

1. Uses appropriate problem-solving techniques in meeting personal problems. ______
2. Deals with problems rather than defends against them. ______
3. Accepts own limitations in working with others. ______
4. Realistically recognizes own abilities in group interaction. ______
5. Assumes responsibility for own ideas in group work. ______
6. Recognizes others' right to give an opinion without undue resistance. ______
7. Profits from criticism and suggestions of the group without attempting to change them. (tolerance) ______
8. Uses reality principle rather than wishful thinking in solving his problems. ______
9. Sees realistic self-role in relation to group role. ______
10. Handles self in face of failure or defeat. ______

SUB-TOTAL ______

APPLYING PROBLEM SOLVING AND REFLECTIVE THINKING SKILLS TO SOCIAL ISSUES

SCORE

0 10 20 30 40 50 60 70

1. Recognizes that a problem exists. ______
2. Defines the problem for study. ______
3. Plans how to study the problem. ______
4. Locates, gathers, and organizes information. ______
5. Interprets and evaluates information. ______
6. Summarizes and draws tentative conclusions. ______
7. Recognizes areas for further study. ______
8. Generalizes from specifics. ______
9. Utilizes the tool subjects to solve problems inherent in social issues. ______
10. Relates the past to the present in the study of change and continuity in human affairs. ______

SUB-TOTAL ______

GRAND-TOTAL--------- ______

THE SELF CONCEPT AS A LEARNER SCALE

THE SELF CONCEPT AS A LEARNER SCALE

Modified from The Self Concept as a Learner Scale, SCAL, Walter B. Waetjen and others, Bureau of Educational Research and Field Services, University of Maryland.

PROCEDURE FOR THE ANALYSIS OF THE SELF CONCEPT AS A LEARNER SCALE*

The Self Concept as a Learner Scale is divided into four components which constitute certain dimensions of one's self concept as a learner. Items within each component are judged in terms of the way an adequate learner would respond. These components are listed below as well as the numbers of the items which are relevant to each.

MOTIVATION

Items
1
through
13

TASK ORIENTATION

Items
14
through
26

PROBLEM SOLVING OR INTELLECTUAL ABILITY

Items
27
through
39

CLASS MEMBERSHIP

Items
40
through
51

Each section is divided into positive and negative statements which are listed below in the appropriate sections.

Motivation		Task Orientation	
Positive Items	Negative Items	Positive Items	Negative Items
# 1	# 2	# 15	# 14
3	4	16	18
6	5	17	19
7	8	20	21
10	9	22	23
12	11		24
13			25
			26
Maximum score = 39	Minimum score = 13	Maximum score = 39	Minimum score = 13

---

*See Teacher Instructions and scale on Page 3.

Problem Solving

Positive Items	Negative Items
# 28	# 27
30	29
34	31
37	32
38	33
39	35
	36

Maximum score = 39 Minimum score = 13

Class Membership

Positive Items	Negative Items
# 40	# 48
41	49
42	50
43	51
44	
45	
46	
47	

Maximum score = 36 Minimum score = 12

Scale: See test which follows.

Scoring procedure:

Positive items are given the same weight as the number which students put in the blanks for those items. For example, if the student answers item No. 1 with a "3," a weight of "3" would be assigned to that item in the scoring procedure. If the student answers item No. 1 with a "1," his score for that item would be given a weight of "1." For negative statements, this procedure would be reversed.

For example, on positive items the scoring would be:

Possible pupil responses to

Item No. 1	Scoring Weight
3	3
2	2
1	1

On negative items the scoring would be:

Possible pupil responses to

Item No. 9	Scoring Weight
3	1
2	2
1	3

On the motivation section, the maximum possible score would be "39" and the minimum possible score would be "13." Maximum and minimum scores are listed below each main section.

SELF CONCEPT AS A LEARNER SCALE

Name________________________

Date________________________

School________________Teacher________________

Teacher Instructions:

These statements are to help you describe yourself. Please answer them as if you were describing yourself to yourself. Do not leave out any items. Listen to each statement; then select one of the answers; next, record the number that represents that particular answer in the blank space at the end of the statement. (Teacher defines difficult words and phrases.)

Responses:	Completely true	Partly true	Completely false
Number:	3	2	1

Remember, you are not trying to describe yourself as others see you, but only as you see yourself.

1. I usually want to go to school. ______
2. I never ask teachers to explain something again. ______
3. I try to change when I know I am doing something wrong. ______
4. I wish I didn't give up as easily as I do. ______
5. I do the work I am told to do, but I don't do extra work. ______
6. I would rather make good grades than poor grades. ______
7. Sometimes I put off until tomorrow what I should do today. ______
8. I become discouraged easily in school. ______
9. I give up easily in school work. ______
10. I do things without being told several times. ______

11. I am satisfied to be just what I am. ______

12. I like school jobs which give me responsibility. ______

13. I like to start work on new activities. ______

14. I cannot remember directions for doing things. ______

15. I do well when I work alone. ______

16. I am satisfied with the way I speak before the class. ______

17. I am able to get my work done on time. ______

18. I have difficulty deciding what to study. ______

19. I sometimes use unfair means to do my school work. ______

20. I do my share of school work. ______

21. I give up if I don't understand something. ______

22. I try to be careful about my work. ______

23. I get nervous when I am called upon in class. ______

24. I make mistakes because I don't listen. ______

25. I do things without thinking. ______

26. I have trouble deciding what is right. ______

27. I find it hard to remember things. ______

28. I think clearly about school work. ______

29. I can't express my ideas very well. ______

30. I can tell the difference between important and unimportant things in a lesson. ______

31. I do poorly in tests. ______

32. I do poorly in my homework. ______

33. I change my mind a lot. ______

34. I feel good about my school work. ______

35. I find it difficult to understand what is going on in class. ______

36. I am as smart as I want to be. ______

37. I solve problems quite easily. ______

38. I can figure things out for myself. ______

39. It is easy for me to make good grades. ______

40. I know the answers before most other pupils in my class know them. ______

41. I can usually see the good points in other pupils' suggestions. ______

42. I find it easy to get along with my classmates. ______

43. I enjoy being part of the class without being the leader. ______

44. I take an active part in class projects and activities. ______

45. I try to play fair with my classmates. ______

46. I try to see things the way other pupils see them. ______

47. I am an important person to my classmates. ______

48. My classmates do not believe I can do school work well. ______

49. I am not interested in what my classmates do. ______

50. I find it hard to talk with classmates. ______

51. I feel left out of things in class. ______

BEHAVIOR RATING SCALE

MARYLAND EDUCATIONAL RESEARCH PROJECT

NAME ______________________

SCHOOL ______________________

TEACHER ______________________

BEHAVIORAL CHARACTERISTICS

OF

EMOTIONALLY HANDICAPPED CHILDREN

I. INABILITY TO LEARN

		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100+
A	Appears anxious and tense when confronted with school work																					
B	Seems unable to concentrate (Short attention span)																					
C	Appears afraid to try																					
D	Has feelings of inferiority																					
E	Lacks self confidence																					
F	Easily frustrated or confused																					
G	Preoccupied (day dreams)																					
H	Lacks interest																					

II. INABILITY TO BUILD INTERPERSONAL RELATIONSHIPS WITH PEERS

		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100+
A	Invites trouble																					
B	Is a scapegoat																					
C	Threatens others physically																					
D	Overly affectionate																					
E	Will not compete																					
F	Feelings easily hurt																					
G	Blames others																					
H	Overly generous																					

II., continued - INABILITY TO BUILD INTERPERSONAL RELATIONSHIPS WITH ADULTS

		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100+
I	Annoys others																					
J	Uncooperative																					
K	Lies																					
L	Cheats																					
M	Steals																					
N	Seeks help excessively																					
O	Submissive																					
P	Defiant of authority																					
Q	Bizarre manner																					
R	Threatens others verbally																					

III. INAPPROPRIATE or IMMATURE TYPES OF BEHAVIOR or FEELINGS

		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100+
A	Prefers to play with younger children																					
B	Gets himself into situations which may hurt or frighten him																					
C	Does not want to share																					
D	Is impulsive																					
E	Cries often																					
F	Is irresponsible																					
G	Is undependable																					

IV. A GENERAL, PERVASIVE MOOD OF UNHAPPINESS OR DEPRESSION

	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100+
A Is easily upset																					
B Is hyperactive																					
C Is irritable																					
D Daydreams excessively																					
E Appears sad most of the time																					
F Lacks self confidence																					
G Withdraws from social contact with adults and peers																					

V. A TENDENCY TO DEVELOP PHYSICAL SYMPTOMS

	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100+
A Has a speech problem (stammering, stuttering, etc.)																					
B Develops a "tic" (squint, blink, etc.) when faced with a difficult situation																					
C Is absent frequently																					
D Complains of nausea																					

BEHAVIOR RATING SCALE

Name of Child____________________

Rater____________________

Date____________________

(1) Inability to learn

Always | Often | Occasionally | Seldom | Never

(2) Inability to build interpersonal relationships.

Always | Often | Occasionally | Seldom | Never

(3) Inappropriate or immature types of behavior or feelings.

Always | Often | Occasionally | Seldom | Never

(4) A general, pervasive mood of unhappiness or depression.

Always | Often | Occasionally | Seldom | Never

(5) A tendency to develop physical symptoms, such as speech problems, pains, or fears, associated with personal or school problems.

Always | Often | Occasionally | Seldom | Never

PROCEDURES FOR UTILIZING SIMULATIONS IN SOCIAL STUDIES

IDEAS FOR DEVELOPMENT OF SIMULATIONS IN SOCIAL STUDIES

A SAMPLE SIMULATION

A History Unit

PROCEDURES FOR UTILIZING SIMULATIONS IN SOCIAL STUDIES

I. Setting Up the Simulation: A Real Life Situation and Problem for Study

   A. Creating and developing awareness of a real-life problem and presenting a life-like situation.

   B. Linking the specific problem to pupil's previous experiences, learning, or study.

   C. Creating a real-life situation.

   D. Encouraging the statement of facts and expression of opinions and feelings about the situation and related problems to stimulate interest.

II. Class Planning for the Simulation

   A. Defining the limits of the problem. Deciding on several specific problem aspects of the simulated situation.

   B. Determining the roles to be included.

   C. Selecting small work groups to focus on specific problems or roles.

   D. Reviewing procedures and standards for small group activities.

   E. Determining methods and techniques of evaluation.

III. Small Group Study and Preparation

   A. Surveying sources of available data, printed materials, models, people, etc.

   B. Utilizing resources to learn facts relevant to the problem.

   C. Organizing, sharing, and analyzing findings.

   D. Programming materials and data for playing key roles of the simulation.

   E. Providing for exchange of roles among small group participants.

IV. Role Playing

   A. Playing roles (small groups) as determined by group after intensive study

B. Evaluating performance in terms of advanced preparation evidenced and conclusions drawn by the study group.

C. Considering the possible need for further study.

D. Providing for playing different roles.

E. Discussing the values of changing roles (as values affect (1) individual, (2) group, (3) problem approach).

V. Evaluation

A. Summarizing major understandings derived from the problem simulation experience.

B. Summarizing related understandings derived from the problem simulation experiences.

C. Analyzing relationships between new learnings and previous experiences.

D. Discussing effectiveness of the simulation as an aid in:

1. Applying insight gained in simulated situations to social environment, family life, and daily activities.

2. Applying self control learned in role playing to other aspects of daily life.

3. Utilizing the social studies curriculum content to learn about the expectations and obligations of role relations in which one engages.

4. Utilizing the skill subjects as tools for solving a variety of problems inherent in the simulations.

5. Working more cooperatively and productively in groups.

6. Adding to the repertoire of information, skills, and techniques in organizing one's efforts in problem solving.

7. Increasing one's ability to be self critical in evaluating his own contribution to the group effort.

SAMPLE UNITS FOR SIMULATIONS

The Family Unit

In this unit the children choose the traditional family roles of the mother, father, older child, younger child, grandmother, grandfather, etc. By playing roles in the family which they do not themselves occupy, they should gain objectivity or insight into the basic family relationships. The specific situations to be resolved will focus on a number of problems, one specific example of which is balancing a family budget. Groups will receive cards telling each participant his role and the amount of money available to the entire family; they will then decide what will be spent and for what items.

A satisfactory solution will be one which provides all of the basic necessities - food, shelter, and clothing - and which also takes care of other financial problems, such as money for education, entertainment, etc. The groups will be assigned different basic sums with which to work - anything from very minimal weekly, monthly, or yearly incomes to an almost limitless high amount. Through balancing a family's books or resolving any of its other problems, the children will learn the distinctions between different socialized family roles; they will learn the responsibilities associated with being male or female; head of the household or child in the house; etc.

This unit can be expanded to include problems facing family groups of other nations.

The Community Helpers Unit

The simulated environment in this unit is that of a city or town and its civil employees. The roles include those of all civil servants from garbage collector, to policeman, to teacher, to fireman, to city council member, to mayor, and to any additional roles which the children are capable of assuming. The children select the various roles in this simulated community and develop typical curriculum problems or "situations." These problems, situations, and roles are placed on charts. Each child receives a card which tells him the role he is playing, e.g. that of a policeman, teacher, mayor, etc. The problem to be solved might relate to deciding where to put a new school, deciding how to schedule trash removal, deciding how to control traffic around schools without interfering with business. The types of problems possible are almost limitless and can begin with ones fairly close to the pupils and related to the things they know; they can be expanded to include world situations with which children may not yet have come into contact but which are a part of the ordinary functioning of the community.

One specific way in which this simulation can be developed is to assign different groups of children the same problem but different roles. Each group will then have to decide who is involved in the situation, who will have the responsibility for making the decisions, who will be responsible for carrying them out, and what effects these decisions will have on all of the community members represented. After this first round, the same cards may be redistributed so that the groups are facing the same problem but are in different roles concerning it. Such a simulated environment relates to the social studies curriculum in many ways: the children should gain notions of division of labor, division of responsibility, actual responsibility, and the effects or implications of decision making.

The next natural variation of the simulation is to present the groups with new problems either keeping or varying the roles played; after that, to present them with two or more world community problems which might be in conflict with each other yet which have to be resolved. Slower children can be assigned to the easier or less responsible roles, and as they learn to play roles and develop the notions inherent in the simulation they can go on to more complex or difficult roles.

The Natural Resource Unit (This unit can be played as a game)

In this unit the children essentially play barter roles; that is they are farmers, manufacturers, miners, etc. As the procedures are followed, each child is assigned a role, is told what natural resources he has, and what his goal is. For example, the child playing the role of a farmer may have fifty cows, thirty chickens, a pasture, and an oil well. He needs grain to feed his chickens and a barn to house his cows, although he does not necessarily need an oil well for farming or a pasture for chickens. He may then trade his oil well, perhaps, with a manufacturer who has grain, workers, and an oil refinery but no crude oil to process. He might also trade his chickens for a barn since the builder might have workmen, building materials, chicken coops and feed, but no chickens.

Each group may trade resource cards with other groups for a certain amount of time; and the group which winds up with either the most resources or the most productive combination of resources wins the game. This game teaches the elements of a free economy, of an economy which is based on the barter system. It shows the children the notion of interdependency necessary to an economic system and economic survival, as well as the advantages to be accrued in building up one's own position under a system of free enterprise.

The Natural Resources Unit can be expanded to include natural resources of other countries with a different economic system.

In all of these simulations, there are possibilities for the children to begin with a very simple or basic notion which they already possess or which they can easily learn; they can then elaborate these notions and build more complex ideas and concepts as the situations or problems become more involved.

A History Unit

The succeeding unit follows the procedures utilizing the simulated environments technique.

A History Unit

I. Setting Up the Simulation: A Real Life Situation and Problem for Study

Motivation is important in every phase of education from the skill subjects to special subjects such as art, music, and physical education. Its value is just as important when using this procedure in social studies. However, the motivational activity need not be limited to one simulation but could apply to one entire section of the unit. One suggested motivational activity for the part of the unit that includes the sample simulation could be a well-planned bulletin board with a motivational question, Why Is There a Continuing Need to Explore?

The teacher will want to keep in mind the often stated ideas, (1) going from the known to the unknown, (2) linking a specific problem to the pupils' previous experiences, and (3) keeping the community as a focal point for comparison with past and present events.

The current space exploration program could very well be used to create and develop an awareness of a real-life situation that will coincide with the problems to be studied, i.e., exploration during the fifteenth century.

The question, "How do you get approval and finances for something you wish to do?" may be used as a springboard to the discussion that will help create a real-life situation which should, in turn, link the previous experiences of the children to the current problem being studied. In answer to the above stated question, the students will bring out the types of activities for which they need money and how they secure the money--jobs for neighbors, a paper route, etc. They will also discuss how they must secure parental approval in order to participate in the activity.

The next step in the widening circle might deal with the space program. A display of newspapers and/or magazine clippings that explains and discusses the financial support for the space exploration would be pertinent. This step will lead the pupils into a discussion of when and why the nations are willing to finance exploration. The children should be encouraged to include their own reading and perhaps television viewing in this discussion.

The question, "What is needed on an exploratory expedition?" and the probable answers, "Money, approval, skill, and personnel" will lead into a comparison of present day space exploration with that of the fifteenth century. At this time the class organizational chart about the explorers previously studied could be reviewed. From this could come the logical question, "How would you have planned for a trip of exploration during the fifteenth century?" Now, the class is ready to do some background reading about Columbus. They began with what was familiar to them and have progressed to the point where they are ready to link their experiences to the specific problems at hand.

Prior to the general reading about Columbus, a list of questions that the pupils would like to have answered can be recorded on the board and later on a chart. These questions and the background reading will be the basis for the formulation of a number of ideas for the simulation. Some sample questions are:

1. Where was Columbus born?
2. What experiences in his childhood stimulated him to become a sailor?
3. What education for sailing did he have?
4. How did Columbus, as a boy, spend his time?
5. What other explorers had he studied?
6. Why was Lisbon, Portugal, a good place to learn about the sea?
7. What impelling force motivates Columbus to explore and finally enlist the aid of Ferdinand and Isabella?
8. Why did Ferdinand and Isabella decide to finance his trip?
9. What rewards did he expect when he returned?
10. Why weren't the sailors eager to go with him?
11. How did Columbus reassure his crew?
12. Where did Spain send Columbus when he returned?
13. Why did Spain become dissatisfied with Columbus?

The pupils will be able to list many more questions about Columbus prior to their background reading because of previous stories, television programs, etc. The period reserved for the background reading should be followed with another period where the discussion of facts and opinions is encouraged. After the general background reading, several situations and their related problems could be "set up," thus setting the stage for the next big step so necessary in this particular procedure: Class Planning for the Simulation.

NOTE: The step just described could be done with the entire class or with small groups. As the teacher becomes more comfortable working with the small group situation, she may find it more profitable for the groups to formulate the questions and gain some of the necessary background information. (Four to ten pupils can comprise each small group.)

II. Class Planning for the Simulation

Planning by the class, with the teacher acting as a guide, is a most important part of this technique. The success of future lessons will hinge on how well this particular step has been executed by the teacher and the children by their participation in both the large and small groups.

The problem and its limits must be defined at this time. The problem is really an outgrowth of the situation and that (the situation) is usually developed from the general background information the students have gained prior to this period. The situation and the problem for this specific simulation was developed when the students realized, from the general reading, that Columbus had difficulty planning his voyage because of lack of money and that he had to justify his reasons for his proposed exploration in order to get the necessary funds from the Crown. The situation actually "sets the stage" for the problem. The students, with the teacher, should decide on the problem(s) (there may be more than one applicable to the same situation).

The roles to be included in the simulation can be determined after the problem has been clearly defined. The discussion and wording of the problem will lead into a discussion of the roles necessary to answer the problem. In this particular simulation the children suggested the roles of King Ferdinand, Queen Isabella, Columbus, and advisors to the king. The advisors can be further defined as Financial Advisor and Naval Advisor.

The aforementioned information concerning the simulation should be placed on a chart, such as:

> Situation: King Ferdinand, Queen Isabella, and their advisors are discussing with Columbus whether or not they should give him money and ships to make his voyage.
>
> Problem: In what ways did Columbus use his knowledge and experience to convince the rulers and their advisors that they should finance his voyage?
>
> Roles: King Ferdinand, Queen Isabella, Financial Advisor, Naval Advisor, and Columbus
>
> Conclusion: (This is filled in after the presentation of the simulation).

The next logical step is to form the small groups to focus on specific problems and roles. The children can have freedom of choice as to the simulation on which they would like to work. (There will usually be more than one simulation planned.) The teacher should direct the formation of the groups so that there will be a variety of levels[*] within each group.

The leader, or chairman, of the group should be chosen by the participants of each group. The duties of this person are to first, help the members with the role choices, keep the group moving toward the goal, which is the presentation of the simulation, and finally, at the close of the period evaluate the work done by the group. Each group leader reports his evaluation to the entire class by answering the following questions which have been listed on a chart: (other evaluation questions may be chosen)

Evaluation for Group Leaders

1. What, specifically, did your group accomplish today?
2. What attitude for learning did your group show today?

Prior to the first time the class is divided into groups, the teacher should work with the entire class to set up procedures, standards, and techniques of evaluation for small group activities. Following the discussion of the suggested procedures, standards, and evaluative techniques, they should be listed on the board, agreed upon by the class, and then transferred to charts so that they may be readily available. Several sample charts are:

HELPS FOR GROUP DISCUSSION

1. Give everyone an opportunity to make a contribution.
2. Speak in sentences.
3. Pronounce your words clearly.
4. If you disagree with another speaker, do it courteously.
5. Speak clearly so that all in your group can hear.

[*] levels of achievement

EVALUATING THE SMALL GROUP DISCUSSION

Individual:

1. What are the advantages of working in small groups?
2. How much did each one participate?
3. Which ideas given were very helpful?
4. Was the discussion tentative or final?

Group:

1. How evenly was the participation divided?
2. How well did the comments given help?
3. Is the decision the best we could make?
4. Did we accomplish our purpose?

SMALL GROUP EVALUATION

1. Did we resolve our problem?
2. Did most of us try to do our share of participating?
3. Did we remember to take turns?
4. Could we answer all of our questions?

III. Small Group Study and Preparation

An important part of the teacher preparation is to have as many resources as possible available for use by the small groups. Textbooks, encyclopedias, trade books, library books, pictures, films, film strips, and slides are a few. Teachers and pupils may find other resources. Often pupils will lend books and materials from their own library collection. Remember, the opening statement suggested that the teacher make these resources available; it did not infer that the teacher is responsible for locating the actual information for each group. It is very important that responsibility be relegated to each group. (These skills should be taught in language arts or English classes and practiced in the social studies.)

When the pupils in the small groups first survey the available materials, they should place a marker with some code number or name to identify the particular group, at the section where the specific information may be located. During the following period the pupils will be able to concentrate on reading, sharing, and organizing their findings.

One of the several groups may be allowed to work in the school library with the librarian. At times, if a room is available, it may be possible for one group to view a film strip that will contain information pertinent to the problem on which they are working. The use of informative pictures is invaluable to the pupils who are operating on a reading level below that expected for the grade. Note-taking should be kept to a minimum. The students should be encouraged to read to gain the information needed to answer the questions and resolve their problem. They should not be hampered by taking voluminous notes.

The group leader, following the research activities, should guide the discussion within the group. The following sample charts may aid the leader to conduct the discussion more effectively. (The standards included in the following samples should be "set-up" with the class prior to small group assignments):

How to Establish the Purpose of the Discussion

1. Establish a feeling of compatability among the members making sure the purpose for the discussion is within the interest and maturity level of the group.

2. Prepare an outline of possible questions and points to be discussed.

3. Prepare the topic in terms of the immediate and ultimate goals (problem, situation, and roles to be played).

HOW TO KEEP THE DISCUSSION MOVING BY:

1. Starting the discussion with a pertinent question.
2. Keeping the discussion moving through questions and comments.
3. Guiding the discussion toward sharing among new members.
4. Encouraging the members to talk to each other rather than to a leader.
5. Keeping the discussion to the point being considered by summarizing at intervals.
6. Seeing that each member has an opportunity to express his ideas and that one or two members do not monopolize the time.
7. Developing a feeling of responsibility among the members for making worthwhile contributions.
8. Respecting the contributions of other members of the group.
9. Developing a feeling of responsibility of the members for the effective conduct of the group--observing rules of courtesy.
10. Developing the ability to accept group decisions.

CARRYING ON THE DISCUSSION

1. State the purpose. Restate as needed.
2. Move steadily toward the goal.
3. Link ideas to what has been said.
4. Summarize what has been decided.
5. Restate the decision to be sure you have carried out the purpose.

PREPARING FOR EFFECTIVE DISCUSSION

1. Understand the purpose clearly.
2. Prepare what you plan to say.
3. Be willing to consider new ideas.
4. Be able to stand alone for "the right."
5. Be willing to accept reasonable decisions made by the group.

This is the time when the knowledge gained from the research done by the members is shared, analyzed, and organized. The sharing is essential because, hopefully, each participant has used a variety of materials. The shared knowledge needs to be analyzed to determine if it is pertinent to the problem and if it can be used in relation to the roles to be played. Organization of the findings is necessary so that a definite conclusion can be reached by the observers when they evaluate the simulation that has been presented by the small group. However, there is no place nor time scheduled for an actual "rehearsal" of the simulation prior to the presentation. Children learn to communicate effectively and to speak extemporaneously with practice and by making mistakes.

The opportunity to be very selective with the materials to be used for playing the roles is important. The time periods spent in the small groups doing the necessary research "programming" the materials provide this opportunity.

During the small group preparation the pupils decide upon the roles to be played and print them on tagboard strips or cards. These will be used by each player during the presentation of the simulation.

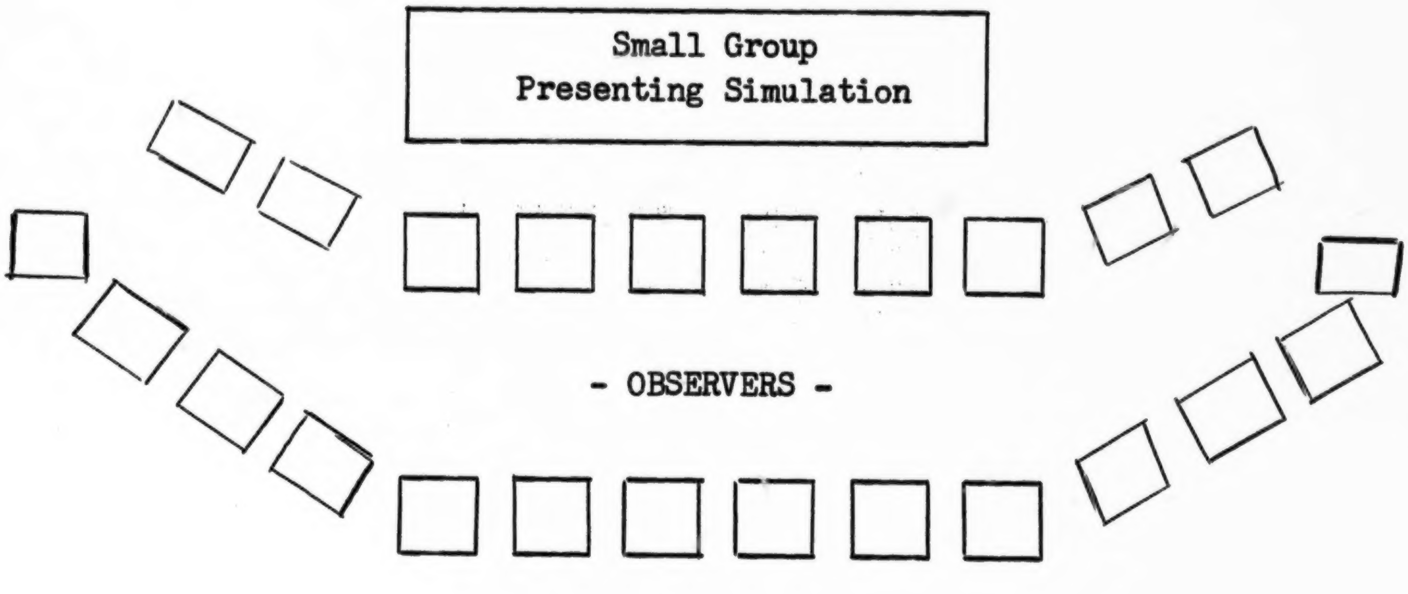
The above mentioned activities will lead quite naturally to the next step, i.e., Role Playing.

IV. Role Playing

Each small group is now ready to present the simulation to the class. Prior to each presentation the group needs to "set the stage" for the remainder of the class members who will assume the roles of observers. At this time the chart, upon which the situation, problem, and roles have been recorded, should be read to the class.

Following this introduction the group, with name cards (roles) in place, will present the simulation to the class. At first it may be necessary to place a time limit of five to ten minutes for each presentation. However, the teacher can judge if this need is evident. At first the groups may have a tendency to "drag" and to present more information than is pertinent to the designated problem. This fallacy will be overcome as the pupils get more experience with the technique.

The physical set-up of the room should lend itself to the success of the role playing. For example--the group participating in the actual role playing may be in the front or back of the room. It has been found to be beneficial if the observers place their chairs, as in indicated in the following diagram, near the small group rather than remaining at their desks.



One must not lose sight of the fact that the observers (all pupils in the class who are not actually participating in the presentation) make up an important group. It is necessary for the children to listen attentively because they will be called upon to state the "conclusion" to the problem as they understand it from the material presented by the small group. Teachers must set standards with the children (not for the children) so that they will be able to do this effectively. It is helpful to list these standards on a chart that can be used for future reference. The chart could include -----

HELPS TO GOOD LISTENING (OBSERVERS)

1. Listen for the main ideas.
2. Think of the details as facts that make the main ideas clearer.
3. Think of how you feel about the main ideas. Do you agree with the speaker?
4. Ask questions to clarify any uncertain information.
5. Think of the main points that are discussed to solve the problem.
6. Listen, so that you will be prepared to express your opinion about the conclusion.
7. Listen open-mindedly to any discussion of your contribution.

The conclusion reached from the presentation will indicate whether or not there is a need for further study by the group. More than one group may present the same simulation. When this is done it is the responsibility of the second group to include more and/or different information than was presented by the preceding group. The observers will formulate and the teacher will record the conclusion reached by each group. The observers will determine which conclusion better answers the problem and give the reasons for their choice. This process is a part of continuous evaluation as the procedures are followed. For example, the observers may evaluate the performance of the groups doing the role playing through questions similar to the following:

1. How well did the players carry out the responsibility of their roles?
2. How successful were they in achieving their roles?
3. What evidences of good preparation were they showing?
4. How suitable was their language in relation to the time and situation?
5. Did we resolve the problem?

At this time the entire class can vote to determine which group presented the best simulation on a particular topic or unit problem. The above five points can be used as evaluative criteria.

The members of the group who have completed the role playing activity may evaluate their simulation through questions similar to the following listed in chart form:

EVALUATION

1. Did we solve our problem?
2. Did most of us try to do our share of answering?
3. Did we remember to take turns?
4. Have we answered all our questions?
5. Did we speak clearly enough?

Step V in the procedure outline is a more general evaluation of total groups' participation in solving the problem(s) set up during the initial planning period.

EDUCATIONAL GAMES

INTRODUCTION

Educational games are one of the techniques we can use in helping children learn with enjoyment. They are valuable in developing favorable attitudes toward school work, in facilitating the learning process, and in aiding children to deal with their emotional and social problems in the classroom.

Some of the specific reasons or occasions for making use of games include the following:

For motivation when the work has less intrinsic appeal than usual.

For "hurdle help" when mastering a specific skill, an understanding, or an important fact.

For reinforcement of the learning of skills or material previously presented.

For helping children review and organize information they have previously studied.

For providing relief from anxiety about achievement by emphasizing the fun aspect.

For relaxation of tension because of feelings of resentment or inadequacy.

For channeling aggressive tendencies into constructive activities.

For helping the low status or low achievers gain recognition. The teacher can invent or adapt a game which will allow such children to excel in that which they can do best. She can also pair the low status child with a high status child, or pair a child who is poor in a specific skill with one who has much skill and let their combined efforts be the basis for determining the winner in a game.

For utilizing the values inherent in motor skills as an aid to learning -- especially manipulative activities.

For diversion tactics when a child, a group of children, or a teacher feels so angry or frustrated that it appears wise, for the good of the individual or the group, to postpone discussion, ventilation, or confrontation until some gratification (unrelated to the aggravating factor) has been enjoyed.

For allowing the children to identify with persons generally recognized as admirable and worthy of respect.

For permitting the children to enjoy the "driver's seat" occasionally, acting in the position of authority figure, i.e., tester, asker of questions, evaluator of product, keeper of records (scores in the games).

For helping children learn quickly and thoroughly the value and importance of cooperation in group efforts. (The group wins or loses - rather than the individual in most of the games.)

GAMES

THE WIZARD

Source - Original. Similar to MEET THE EXPERT, the name of a television program.

Preparation - With the teacher guiding the class the children gradually become aware of the academic area or physical skill in which each child is outstanding. The class begins to recognize small groups of children as "our wizards" on things such as map reading, zoning regulations, long division, interpreting graphs, using references and/or source materials, catching or batting technique in baseball, etc.

The newly recognized "wizards" try to retain their status by working to become more skillful or better informed.

Each child tries to become alert to possible questions or problems with which to "stump the wizards." Such questions or problems should be based on the current study and on material available to everyone in the class.

Playing the Game - When the children appear to have enough suitable questions or problems in a particular area ready, they write them on slips of paper. A committee checks them with the teacher for appropriateness. No questions involving minute details or obscure points are used.

Several children volunteer to challenge the "wizards." Slips of paper bearing questions or problems are drawn one at a time and read to a challenger who attempts to answer correctly. If he does so, he is awarded a score of 1 - 5 points. If he cannot answer correctly, the opposite player tries until the correct answer is given.

A child who can earn a high score is considered one of the "wizards" in that area or skill. One whose score is very low must show much improvement next time in order to retain his status as a "wizard."

Value - Each child in the class benefits by feeling that the group knows he is outstanding in some ability or knowledge that is desirable. He receives positive feedback when he works to retain his status. Little or no negative feedback is encouraged by the teacher. The child himself usually realizes that he must improve.

FUN WITH WORDS

Source - This game is similar to PASSWORD, the well known television program.

Preparation - During the work on any unit in social studies the children suggest words to be put on a vocabulary chart. This may be through informal oral suggestion during class discussion or by individual cumulative lists kept by each child during the unit for the game and made into one list by a committee assigned the responsibility.

A student or the teacher may make the chart and flash cards (preferably using attractive color), with each word shown on one of the flashcards.

Playing the Game - The vocabulary chart should be clearly visible to all to minimize frustration and limit the words used.

Children volunteer to play and invite a child to be their partners. Two pairs of partners play each time, hereafter referred to as 1A and 1B (partners) and 2A and 2B (partners).

1A and 2A sit facing class; 1B and 2B sit with backs to class facing their own partners.

The Leader fastens one of the flashcards to the wall behind 1A and 2A. 1B and 2B alternate in giving a single word stimulus until 1A and 2A respond with the correct word.

When the correct word has been given, two new pairs of partners may play or one new pair may take the place of the losers and then compete against the winners of the first set.

Value - The children learn more easily and thoroughly the meaning of new terms important in the unit. They are highly motivated to list or suggest words to be included as the unit work progresses. They learn to associate many related ideas or concepts as they consider various possible stimulus words. They learn to evaluate the relative effectiveness of the varioms possible stimulus words in order to get the desired response. They learn to choose the words most significant to the particular unit being studied in order to keep the list on the chart to no more than 25 or 30 words.

Examples - The types of words suggested by children in a unit on how the thirteen colonies became a nation:

legislative
assembly
rebellion
representative
jurisdiction

levy
excise
proportional
flexible
authorized

Words from a unit on European background and exploration of the New World:

crusade
founded
isolated
circumnavigate
migrate
explore
primitive
prosperous
expedition
permanent
flourishing
demarcation

ANCESTORS

Source - Similar to a television game, CAN YOU TOP THIS?

Preparation - Children list names of outstanding people studied in a social studies unit. A card is made for each person on the list with the name of that person on the card.

A chart similar to the one shown below is posted:

1. Pretend that one of the famous people on the list is your father, grandfather or other relative.
2. Describe his exploits and the importance of the things he accomplished.
3. Use dramatic ways to convince your listeners of your ancestor's courage, persistence, resourcefulness, etc.
4. *Stick* to *facts* for which you can quote your source.

Playing the Game - Three or four children each draw one of the cards. Each child boasts of the exploits of the person whose name was on the card which he drew. The other children vote to indicate which child gave the fullest, most interesting and convincing account of the importance of his ancestor.

In another period 3 or 4 more children may participate, speaking of the same or different people.

Value - Children use constructively their desire to boast and feel important. By praising someone else they enjoy the reflection of glory and avoid the group disapproval usually incurred by those who boast about themselves. Children who have problems in identifying with their parents or who find little in their parents to be proud of may get some satisfaction out of this brief experience in the role of a relative of an important person.

Examples - From unit on exploration:

Vasco da Gama
Prince Henry
Columbus
Magellan
Cabot
Cabral

From a unit on how the thirteen colonies became a new nation:

John Adams
Patrick Henry
Alexander Hamilton
Benjamin Franklin
Thomas Jefferson

WHO MIGHT HAVE SAID IT?

Source - Original.

Preparation - A cumulative chart of outstanding leaders is kept during the study of the unit.

As each leader is discussed in relation to the significant event in which he participated, the children discuss informally the feelings which he may have experienced.

Playing the Game - Following teacher demonstration and example, the children are encouraged to assume the role of one of the leaders listed and speak with appropriate feeling using words it would be reasonable to believe the leader might have said (In one sentence or several sentences).

The other children try to identify the leader whose role the child has assumed.

When the children have begun to show sufficient freedom and spontaneity, they may have a role assigned by drawing one of a group of cards, each bearing the name of one of the leaders.

Value - This game provides another opportunity for children to identify with famous people and to express strong feelings in a situation where such expression is not merely accepted but brings approval. This game can be used effectively to review the highlights of a unit. It stimulates verbalization of associated ideas. A lively, interesting discussion usually results as children begin to make comments such as, "Oh, I know when that happened. It was when he had just been.........." The enjoyment contributes to the learning.

Examples - From a unit on European Background and Exploration of the New World:

"When I die, fasten weights on my body and drop it in the big muddy river."
(De Soto)

"Look! We are sailing north and the land is on the left."
(Diaz)

"When you turn back build a tower of stone on the shore to show how far south you have sailed."
(Prince Henry)

"Have you ever seen such plentiful and beautiful grapes?"
(Leif Ericson)

"Have you ever seen people with such big feet?"
(Magellan)*

"To think that my crew would leave us, my son, adrift in these icy waters in this strange land."
(Henry Hudson)

"We saw plenty of hunchbacked cows and poor Indian villages but no cities of gold."
(Coronado)

"Let us push onward and bathe in one more spring."
(Ponce de Leon)

"We have used up all of our money in the war with the Moslems. Come back in another year."
(King Ferdinand)

"If I take any more treasure aboard, the Golden Hind will sink."
(Sir Francis Drake)

---

* in reference to the Patagonians in Southern Argentina.

CARD SORTING

Source - Original (but inspired by Stephenson's* "Q Sort" technique for personality assessment).

Preparation - During the period of study on a social studies unit or at the conclusion, the children suggest dozens of phrases that seem significant to them. In a unit on geography (of Maryland) they might include pollution of oyster beds, tomato packing houses, bituminous deposits, the Biological Warfare Laboratory, fields of tobacco, Fort McHenry, St. John's College, granite quarries, Solomon's Island, or other similar items. A unit on history might have phrases referring to events, places, living conditions, etc. These items are listed on the chalkboard. Then 5 or 6 sets of 3 x 5 cards are made up with one item on each card. Each set contains all of the items.

Playing the Game - The children are divided into 5 or 6 groups. Each group is given a set of cards. Their task is to sort the cards into categories (Examples: Geographical regions, counties, or occupations might be the basis of the categories for "Geography of Maryland." The various New England colonies might be the basis for the categories in a history unit on "The Northern Colonies." Nations served might be used for "Explorers of the New World").

The children in each group sort the cards into piles (perhaps Eastern Shore, Southern Maryland, The Piedmont Plateau, The Appalachian Region).

In some classes the children may then arrange the cards in each pile in sequence (chronological order for a history unit); (for a geography unit, in the order in which one would see reminders in flying over the state by helicopter from northwest to southeast).

A variation is to arrange the cards in order from most significant or most typical to least significant or least typical for each region or colony.

The children then use the cards to work with the teacher in developing an organizational chart on the chalkboard.

Value - This game helps children organize details by classifying and by arranging in a logical sequence. Suggesting the items to use is an activity they enjoy, especially when they must reduce the total number by deciding to eliminate the least important ones. Manipulation of the cards as the children sort and sort again seems to be particularly gratifying if the game is played following some difficult work requiring sustained concentration on abstract concepts.

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* Cronbach, Lee J., Essentials of Psychological Testing, 1960, Harper and Brothers, New York, under the editorship of Gardner Murphy, pp. 514-516 and 593.

Examples - mixed farming area
State House

Limestone quarrying
Presidential Retreat
Strip mining
Poultry farms
Ocean resorts
Fertilizer plants near piles of oyster shells
Wye Oak
First permanent settlement in Maryland
Biological Warfare Laboratory
Polluted oyster beds
Delmarva Peninsula
Naval Academy
Tobacco farms

THE MAP GAME - NUMBERS FOR LOCATION

Source - Original.

Preparation - In order to help children become familiar quickly with the map of a continent, country, or other area to be studied, the teacher prepares for each child a hektographed copy of a map of the area to be studied. The map will have no labels. Items of importance are numbered on the master. The teacher may use a code to designate various types of items.

Sample: Number only as 2 - country

Number in a circle ⑱ - body of water

Number in a square $\boxed{22}$ - city

Number in a rectangle $\boxed{\quad 30 \quad}$ - topographical region

Each child must be given a copy of the hektographed map with the numbers on it and a text or atlas which includes a map or maps showing each of the numbered areas.

Playing the Game - The children divide into groups of 3 - 5, each with a leader. They must use skill in locating the most useful map in the text or atlas for this particular task.

The group decides how to divide the work among the members. The group may decide to work as a whole, with one person recording the names of the places numbered. It may decide to divide the numbers such as 1 - 12, 13 - 24, 25 - 35 and assign the listing of the answers to the sub-group assigned each range of numbers.

The group which lists the most correct answers written legibly with correct spelling at the end of a predetermined interval, perhaps 15 minutes, wins the game.

The members of a winning group may often find themselves in demand as group leaders the next time the game is played with the same map, if reinforcement is needed, or with a different map.

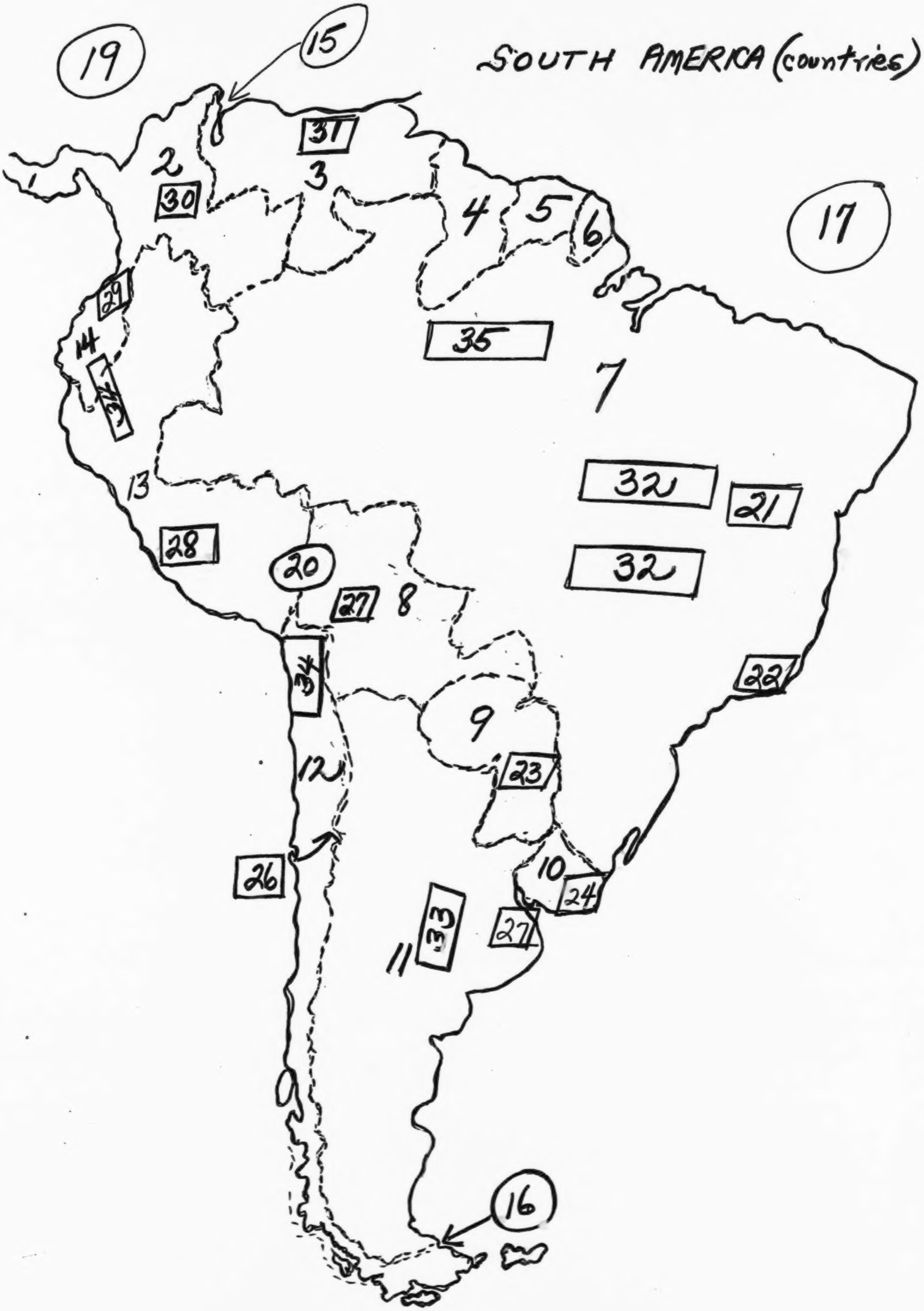
Value - This is a pleasant, quick, and easy way to help children become familiar with a map, to use symbols in a code, and to spell correctly when copying answers from the map.

This game is such a favorite that we used it for purposes of review after being out of school for a long holiday. We used it in integrating new children into the group on September 6, 1966 by placing each new child with 2 "old pros."

See sample map attached. Key for Topographical Regions:

32	Brazilian Highlands
33	Pampas
34	Andes Mountains
35	Amazon Lowlands

SOUTH AMERICA (countries)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ABSTRACT

This three-year study investigated the effectiveness of a simulated environments technique on academic achievement and behavior change of 64 emotionally handicapped elementary school subjects in regular and special classes. Subjects were screened from 1,000 third-grade pupils; during the diagnosis phase children giving evidence of neurophysiological dysfunction were removed. The identified population were then randomly assigned to four cells. The technique included a combination of teaching strategies emphasizing group-centered activities and implemented in the unit framework of social studies content. Comparisons were made by analysis of variance and other statistical procedures. With the exception of reading comprehension, favoring special classes, there were no significant differences among the groups in academic achievement. The average of the mean gains for all groups was equal to or exceeded the county norms on six of seven variables. Significant differences favoring the experimental groups were found in interpersonal relationships, personal effectiveness in social situations, and problem solving, but no differences between regular and special cells. No significant differences were found among cells on other behavior instruments; improvement was noted in all cells. Although findings were not uniformly positive, it was concluded the simulated environments technique has a positive effect on the ability of emotionally handicapped children to relate with others and to apply problem-solving skills to learning and personal problems. The study confirmed the teacher's key role in evaluating individual behaviors. There was little evidence that emotionally handicapped children can appraise themselves. Positive findings are sufficient to encourage application and further study of the simulated environments technique.